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A REVIEW OF DISTANCE EDUCATION
IN
ONTARIO UNIVERSITIES

prepared by

W.A.S. Smith and B.L. Snowden

for

The Council of Ontario Universities
Le Conseil des Universites de l'Ontario
130 St. George Street
Suite 8039
Toronto, Ontario M5S 2T4

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PREFACE

At its meeting in September 1981, the Council of Ontario Universities established as a priority for its activities in the coming year the exploration of opportunities for better coordinating the distance education activities of its member institutions. Subsequently a decision was taken to engage consultants to undertake a review of this area. The terms of reference are given on page 3 of the report.

Dr. W. A. Sam Smith, Associate Vice-President (Academic) of the University of Calgary and Mr. Barry L. Snowden, Vice-President (Finance and Facilties), Athabasca University, were engaged as consultants. Throughout the course of the study, the consultants worked with a committee of liaison representatives appointed by the universities for the study. Contact was also maintained with other relevant agencies, especially TVOntario.

The consultants presented an interim verbal report to the meeting of Council in June 1982, and a final written report in September 1982. Following review of the report within the universities and solicitation of comments from the Ontario Council for University Continuing Education, Council approved a set of recommendations arising out of the report at its meeting in March 1983. Council's position is summarized in the Circuletter which follows this preface.

COUNCIL OF ONTARIO UNIVERSITIES
CONSEIL DES UNIVERSITÉS DE L'ONTARIO

130 ST. GEORGE STREET, SUITE 8039
TORONTO, ONTARIO M5S 2T4
(416) 979-2165

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Circuletter 3333

To: Members of Council
Liaison Committee for Study of Distance Education
Ontario Council for University Continuing Education

From: Deputy to the Executive Director

Subject: COUNCIL DECISIONS ARISING OUT OF REVIEW OF DISTANCE EDUCATION IN ONTARIO UNIVERSITIES

Following review of the consultants' report, "A Review of Distance Education in Ontario Universities," Council at its 11 March meeting decided to act on the principal recommendation of the report, to establish a standing Committee on Distance Education. This Committee will have the following objectives, terms of reference, membership, and budget.

A. Objectives

1. to encourage and facilitate the exchange of information about institutional activities and developments in distance education;
2. to provide opportunity for coordination of programme planning activities and resultant plans;
3. to initiate inter-institutional credit transfer policies and procedures;
4. to develop mechanisms for cooperation among universities and between universities and other organizations in development of course materials and delivery of services;
5. to facilitate the establishment of cooperative arrangements for the marketing of distance education materials;
6. to facilitate investigation of potential sources of funding for cooperative activities and to coordinate funding; and
7. to ensure the establishment and effective functioning of appropriate working groups.

B. Terms of Reference

The role of the Liaison Committee on Distance Education shall be to provide a forum for the consideration of issues and problems facing the university system in developing and coordinating distance education programmes. The Committee will seek to facilitate such joint efforts as may be deemed appropriate in Ontario to enhancing the quality and accessibility of distance learning opportunities, to rationalizing distance education, and to striving for cost-effectiveness in programme delivery. Though the primary concern of the Committee will be undergraduate degree-credit activities, attention should also be afforded to such ventures as delivering professional development courses via alternative delivery systems.

Primary functions shall include:

1. Encouraging member institutions to cooperate in such undertakings as:

    (a) sharing information about programme offerings, programme plans, and delivery systems;

    (b) identifying the problems confronting university distance education;

    (c) the sale and exchange of course materials;

    (d) new programme and course development planning;

    (e) facilitating the likelihood that learners-at-a-distance can partake of courses offered at all institutions;

    (f) facilitating joint utilization of course materials and staff among institutions, as well as the sharing of delivery systems;

    (g) assessing the feasibility and desirability of developing an integrated degree programme offered by distance education.

2. Maintaining continuing liaison on behalf of the universities of Ontario with all external agencies which might abet distance learning opportunities in Ontario, as well as with organizations representing present and prospective learners.

3. Considering and approving proposals for the establishment of working groups for specific purposes.

The Committee shall prepare and submit an annual report to the Council.

C. Membership

One representative appointed by each COU member institution with an interest in distance education.

Chair: to be named by COU Executive Committee

D. Budget

The Committee shall operate within an annual budget established by the Council. This budget may include funds made available by outside grants. The funding to be provided from Council's own resources will be modest, for the provision of limited support services.

Working groups established under the auspices of the Committee will have their own budgets, funded by separate budgetary actions of the institutions involved, aided by whatever outside funding the projects can command.

* * * * *

The report will be published shortly, together with this summary of Council's decisions. The Executive Committee will proceed with the establishment of the Committee in the next couple of months.

G Grant Clarke

G. Grant Clarke

GGC:jf

A REVIEW OF DISTANCE EDUCATION IN ONTARIO UNIVERSITIES

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1. INTRODUCTION

1.1 Terms of Reference

In March 1982 the Council of Ontario Universities asked W.A.S. Smith and Barry L. Snowden to undertake a review of Ontario Universities' involvement with distance delivery of university level educational opportunities. The terms of reference for the review were as follows:

1) to review existing and planned activities of the Ontario universities in distance education;

2) to assess the feasibility of a cooperative approach to university distance education in Ontario;

3) to recommend on the desirable organizational approach to expanding co-operation among the universities and between the universities and TVOntario;

4) to recommend on the form of cooperation, assessing alternatives such as:

   - an expanded and better coordinated range of individual course offerings;
   - the development of an integrated degree programme for adult part-time learners;

5) to advise on the desirability of developing in Ontario additional educational opportunities specifically designed for adult part-time learners;

6) to advise on cost considerations and time requirements of the above;

7) to recommend further action.

1.2 Methodology

The study commenced with a meeting with university representatives, convened by the Council of Ontario Universities on March 18, 1982, in Toronto. At this meeting, study objectives, terms of reference and time lines were made known to institutional representatives, and information requirements were discussed. The meeting also produced agreement on the definition of distance education to be used for the purposes of the study. Recognizing that a number of descriptors are used somewhat synonymously to identify areas of educational activity that fall within, or share characteristics with distance education (correspondence study, independent study, external studies, distance teaching, open learning), agreement was reached on the use of a working definition with two primary elements:

- the physical separation of teacher and learner
- the use of technical media (print and/or electronic to carry educational content

Following the meeting the consultants prepared and forwarded an extensive information request to each institution (see Appendix 1.)

Within a few weeks it became apparent that a number of institutions would not be able to respond by the date specified initially and thus the target date for receipt of information was extended from April 23 to May 28, 1982. In addition, to deal with a number of common problems largely surrounding the matter of definition, a meeting of the Liaison Committee members with Mr. Snowden was held at the University of Waterloo on April 28, 1982.

On the basis of a review of the written submissions, and in response to invitations from individual universities, the following universities and agencies were visited: the University of Guelph, the University of Waterloo, York University, Ryerson Polytechnical Institute, the Open College, Laurentian University, the Ontario Education and Communication Authority/TVOntario, the Ministry of Colleges and Universities, the Ontario Council for University Affairs.

An interim report was then prepared for the June 18 meeting of the Council of Ontario Universities.

A first draft of the final report was prepared during the month of July and made available to members of the Liaison Committee and the Offices of the Council of Ontario Universities for reaction. The responses and comments on the draft report were then reviewed and this final report prepared.

As an aid to further review and planning, a selected bibliography of the literature was prepared and is included as Section 9.

As noted in the covering letter to the distribution of the draft of the final report, it is apparent that the nature of the review, its terms of reference, and in particular the time lines have precluded the consideration of some significant issues. However, it is our view that the findings reported, in particular the suggestions for response by the Universities of Ontario, are practical and supported by the information obtained. Moreover, we suggest that there is a timeliness about the implementation of certain of the suggestions contained here and an opportunity or challenge for the university system in Ontario which may not recur in the near future.

1.3 Summary of Findings and Recommendations

A summary of our findings and recommendations is as follows:

1) some 16,000 Ontarians are now being served through University credit programmes offered through distance education techniques;

2) in the short run, 25,000 to 30,000 additional Ontarians are likely to be attracted to university educational opportunities delivered by distance education techniques;

3) Laurentian University, the University of Waterloo and Wilfrid Laurier University now have significant programmes of study offered through distance education techniques;

4) the University of Guelph and Laurentian University have underway major developments for expanding their distance education operations;

5) the Ontario Educational Communications Authority/TVOntario is now providing significant services through distance technologies in cooperation with the educational institutions in Ontario (see Appendix 3);

6) the Ontario Educational Communications Authority/TVOntario wishes to expand and improve the services that it offers in cooperation with the educational institutions of Ontario (see Appendix 3);

7) although the current decentralized institution approach can be expanded and extended, a more effective and efficient total level of service in terms of both breadth and availability of programme offerings and utilization of delivery technologies will result from a coordinated approach to meeting the potential demand for distance education offerings;

8) for both political and economic reasons the establishment of a new institution devoted exclusively to the development and delivery of educational opportunity at the university level through distance education techniques is not recommended;

9) to facilitate the expansion of educational opportunities at the University level through the distance education mode it is recommended that formal consortia of universities be established with separate and adequate funding;

10) to facilitate the development and delivery of educational materials and learning opportunities, formally recognised working groups, composed of representatives of educational institutions and other appropriate agencies, should be established. Membership in these working groups should be determined primarily by competence in the use of a particular delivery medium or communications technology and/or a subject area, academic specialty or involvement. Although beyond the formal terms of reference of this study similar structures involving working groups composed of representatives of the colleges, technical institutes, universities and TVOntario should be established to extend educational opportunities in non-degree programmes.

2. CURRENT INVOLVEMENT

2.1 Overview of Ontario University System

Ontario's sixteen universities are located in twelve of the major cities in the Province (see Table 1 and Figure 1). Three are located in Eastern Ontario; Carleton University and the University of Ottawa in Ottawa and Queen's University in Kingston. Two are in the Southwestern Region, the University of Windsor (in Windsor) and the University of Western Ontario in London. Lakehead University at Thunder Bay serves Northwestern Ontario and Laurentian University, located in Sudbury, serves the Northeast. Nine are located in the Central Region. In addition to the University of Toronto, York University and Ryerson Polytechnical Institute are within the greater metropolitan area of Toronto. Trent University is located in Peterborough. Kitchener and Waterloo host the University of Waterloo and Wilfrid Laurier University and the University of Guelph is located nearby. McMaster University (Hamilton) and Brock University (St. Catharines) are also located in the heavily populated Central Region.

Full-time and part-time enrolments (Fall 1980) are shown in Table 1 for each university as are population data for each city and region.

TABLE 1

OVERVIEW OF ONTARIO UNIVERSITY SYSTEM

			POPULATION 18+ IN 1980[2]			FALL 1980 ENROLMENTS[3]	
REGION[1]	CITY	UNIVERSITIES	CITIES	OTHER	TOTAL	FULL-TIME	PART-TIME
Eastern	Ottawa	Carleton	387 000			8 400	5 600
		Ottawa				11 700	7 200
	Kingston	Queen's	82 000			11 000	3 300
			469 000	400 000	869 000	31 100	16 100
Central	Guelph	Guelph	90 000			9 400	1 400
	Hamilton	McMaster	293 000			9 900	3 600
	Kitchener/Waterloo	Waterloo	214 000			15 300	5 600
		Wilfrid Laurier				3 900	2 800
	Peterborough	Trent	100 000			2 200	1 200
	St. Catharines	Brock	137 000			2 300	3 500
	Toronto/York/Peel	Ryerson	2 000 000			9 200	9 600
		Toronto				33 900	15 500
		York				11 800	12 500
			2 834 000	769 000	3 603 000	97 900	55 700
Southwestern	London	Western	230 000			17 700	6 100
	Windsor	Windsor	222 000			6 800	4 000
			452 000	432 000	884 000	24 500	10 100
Northeastern	Sudbury	Laurentian	126 000	230 000	356 000	2 600	4 100
Northwestern	Thunder Bay	Lakehead	101 000	43 000	144 000	2 700	1 400
TOTALS			3 982 000	1 874 000	5 856 000	158 800	87 400

Notes: 1. Regional definition is that used by the Ministry of Treasury and Economics for population analysis and projection purposes.

2. Source: Ministry of Colleges and Universities.

3. Source: Ministry of Colleges and Universities' reports provided by COU staff.

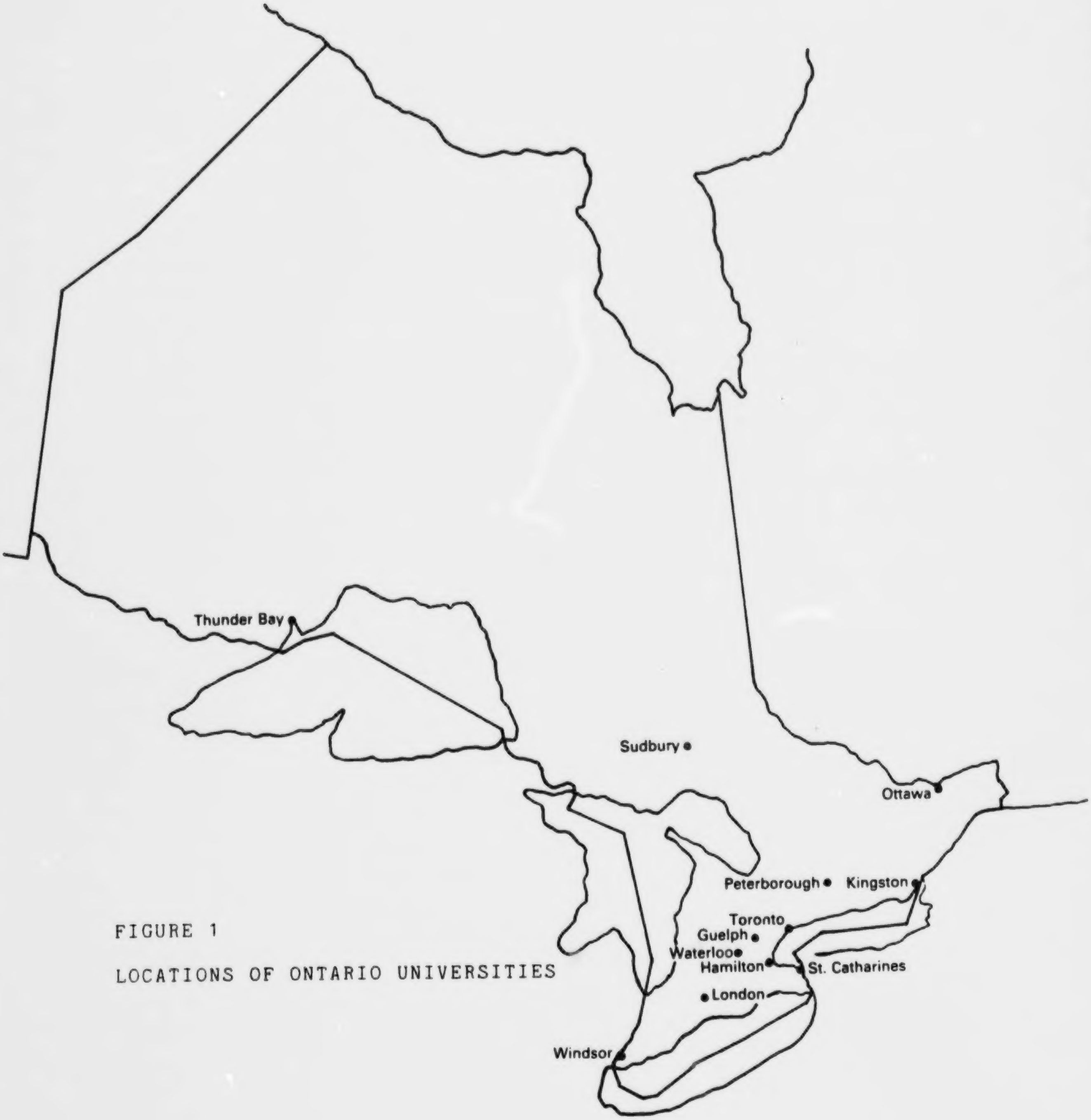

Thunder Bay
Sudbury
Ottawa
Peterborough
Kingston
Toronto
Guelph
Waterloo
Hamilton
St. Catharines
London
Windsor

FIGURE 1

LOCATIONS OF ONTARIO UNIVERSITIES

2.2 Current and Planned Activities in Universities

At an early stage in this review, the consultants prepared an extensive information request which was forwarded to each institution (see Appendix 1). The information reported in the section which follows has been obtained from the responses to this request, from visits to five of the universities, from other information and documentation provided by COU staff and from those attending liaison meetings and others.

2.2.1 Brock University

Under the definition for distance education adopted for the purposes of this study, Brock University is not involved with this mode of delivery. For the past five years, credit courses have been offered by regular faculty at a number of off-campus locations. Demand for these offerings has apparently declined. In 1979, there were 154 registrations in seven courses. In 1981, five courses were offered with a total of 53 registrations.

The University has discontinued off-campus offerings for the current year, substituting a "course on request" policy. The policy provides for the offering of a regular course at an off-campus centre (of which there were seven in 1981) where sufficient numbers (10-15 persons) request the offering. This, together with a conscious effort by all departments to cycle courses through an extended-day schedule on campus, is expected to meet the increasing demand for part-time studies in a fairly small university service region.

2.2.2 Carleton University

Carleton University has been involved with distance education programming for the past four years, using television as a primary delivery medium. Broadcasting began in 1978-79 using a live "production" model with an instructor lecturing to a studio class as well as to the television audience. From 11 courses in the initial year, offerings grew to 15 in 1979-80. Eleven courses were offered in 1980-81; ten in 1981-82, including two "pre-produced" courses, both developed at Carleton University, one with assistance from TVOntario. All courses carry credit toward the B.A. degree.

The University's School of Continuing Education is responsible for the organization and coordination of distance education offerings, providing registration, mailing and other logistical arrangements. Academic departments are responsible for the preparation of supporting materials and for the provision of instructors and tutorial resources. Since "camera-in-classroom" is the normal production mode, the instructional development of a course is part of a faculty member's normal teaching load. For one of the two pre-produced courses, the developer of the course had partial relief from normal teaching duties.

Enrolments have varied roughly in proportion to the number of courses offered in each year: 319 in 1978-79, 384 in 1979-80 and 184 in 1980-81. In 1981-82, courses had an average enrolment of 20 for a total of 204 course enrolments.

To support the distance education student, all university services and facilities are available including individual counselling on-campus, both day and evening. Study skills workshops are offered several Saturdays a year through the School of Continuing Education for a modest fee. A free, on-campus workshop on essay writing is offered twice a year. Tutorial services vary from course to course depending upon the approach of the department and instructor responsible for the course.

Carleton University does not plan to offer a degree programme by television delivery for a number of reasons:

1) There are unlikely to be sufficient numbers of students to justify the time and effort for even "camera-in-classroom" courses at upper levels;

2) The seminar basis of many upper-level courses is difficult if not impossible to provide in the television mode;

3) Carleton does not offer a general B.A. degree; the choice of any discipline for distance study would be difficult, arbitrary and have limited market potential.

Although the University has not formally considered a print-based correspondence mode of delivery, resistance would be anticipated on grounds that the student-instructor relationship and personal interaction are vital, again, mainly in upper-level courses.

A cautious approach to expansion is foreseen by the University, concentrating on demand for professional upgrading (teachers, bankers, etc.) and from those considering re-entry into the conventional education stream. Resource constraints place limits on improvements to existing offerings and modes of delivery.

2.2.3 University of Guelph

Although the University of Guelph does not currently offer degree credit courses in a distance education mode, an implementation plan has been prepared and initial courses are being developed. The three year plan calls for 20 credit courses to be available for delivery by May 1983, 30 by September 1983 and a total of 50 by September 1984. Courses will be selected to meet the following criteria:

1) subject matter appropriate for distance delivery;

2) demonstrated market need;

3) balance between service and specialty offerings, to meet the needs of those pursuing a B.A. degree and those seeking specific career upgrading.

Certificates or diplomas will be issued for completion of certain course sequences or groupings.

Initially, at least, Guelph courses will use technology being used in non-credit programming, including printed course materials, assignment manuals, recorded lectures (audio tapes), color film strips, and telephone tutorial services. Additional technologies may be incorporated as the programmes develops, e.g. television programmes, interactive television, teleconferencing and electronic mail. In addition, some courses may include intensive on-campus or off-campus laboratory or seminar experiences.

By 1984-85 the University of Guelph expects a mininum average of 25 students per course in the 50 credit courses planned to be offered by this date. Long-term potential is estimated to be 10,000 course enrolments per annum with growth in those programme areas that are relatively unique to the University and with a special emphasis on service to professional groups. Target groups will include agrologists, family and consumer studies specialists, real estate professionals, veterinarians and biologists.

2.2.4 Lakehead University

Lakehead University does not currently use distance education means to reach students in locations beyond commuting distance from its campus in Thunder Bay. The University has a substantial off-campus offering and maintains a number of support centres where there are concentrations of demand for part-time participation in credit programmes. Native education is a special demand area.

Thunder Bay is the only major urban population centre in the vast northwest Ontario region. Other centres are relatively small and isolated. A demand for distance education delivery exists and the University would appear to have the necessary potential to exploit this means of delivery.

2.2.5 Laurentian University

Distance education programming at Laurentian University is administered and funded through the Centre for Continuing Education, which is responsible for all aspects of part-time studies at the University. Forty-one courses were offered in 1981-82 of which 19 were first year courses, 19 were second year, and three were third year. All courses carried credit toward the B.A. degree; five towards a Bachelor of Liberal Science. Seven courses were offered in the French language. Winter session (1981-82) registrations totalled 1030 for an average of 25 per course.

Nine of the courses offered in 1981-82 use television as the primary delivery medium, supplemented by printed materials. The balance are print-based and offered in a correspondence mode; four of these have an audio-tape component. Television-based courses are delivered in a broadcast mode, through the Mid-Canada Network of CKNC-TV (Sudbury), a privately owned station with coverage of all of North-Eastern Ontario. Two courses are carried on TVOntario, one by both TVOntario and CKNC-TV. Limited tutorial support is provided by course instructors and their academic departments.

Although not slavishly followed, the University has adopted a course development model designed to ensure that television and print-based courses have sound instructional design, high levels of academic content, and technical quality. The model provides for inter-institutional consultation and internal coordination at initial proposal, design and development and implementation stages and includes an evaluation phase. Most courses have been developed by faculty working on an "over load" basis with a stipend paid by the Centre of Continuing Education. For some courses (four) consultants have been retained to provide subject matter input, some courses (three) have been developed as part of regular teaching load and in two cases, staff members were seconded to the Centre to develop courses. The Centre is responsible for "technological and pedagogical" aspects in all cases.

Three courses have been acquired from other institutions: Athabasca University (Alberta), Wilfrid Laurier University, Coastline Community College (California). Three are used by four other institutions: Athabasca University (Alberta), North Island College (British Columbia), University of Ottawa, Wilfrid Laurier University.

With respect to future expansion, since Laurentian University serves all of northeast Ontario, there is need for distance education programmes of sufficient breadth and depth to enable degree completion. Faculty resources are seen to be insufficient and conventional modes of delivery too expensive to effectively serve the area. Current plans call for adding six courses per year for the next five years to expand the B.A. (General) and B. Liberal Science offerings and to introduce some Business Administration offerings. Enrolment potential over this period is estimated to be two to three times the current approximately 1000 course enrolments (i.e. 2000 to 3000 course enrolments by 1986-87). Other areas for potential development include supplementary course offerings in professional areas (e.g. Social Work, Nursing, Physical Education).

Laurentian University has three federated religious colleges which offer television and correspondence courses. Although operations are independent, except for publicity and registration, there is increasing cooperation. Three affiliated colleges across northeast Ontario are also entering the distance education field, and have plans for expansion.

2.2.6 McMaster University

At present, McMaster University has no direct involvement in "distance education" in degree studies. A pilot course in Psychology is in preparation for television broadcasting and completion is expected by January 1983.

The University's School of Adult Education offers two non-degree programmes in the distance education mode: Municipal Administration and Human Services. The Municipal Administration programme is offered in cooperation with the Association of Municipal Clerks and Treasurers of Ontario (AMCTO). Instruction is delivered in a print-based correspondence mode, augmented by occasional meetings and seminars. Completion of the four units of the programme and a challenge examination leads to AMCTO accreditation. The Human Services programme is designed to meet the needs of persons currently employed in the Human Services field or those who have significant experience as a volunteer. Courses are available through home study materials (print, audiotape) supplemented by seminars and workshops.

The McMaster University Senate recently endorsed a report and series of recommendations regarding Continuing Education including the use of distance education modes for degree studies. The recommendation most directly related is:

> "That, wherever feasible, greater use be made of cable television, audio cassettes, and other similar means to increase the opportunities for "off-campus" instruction provided by McMaster."

A number of other recommendations are aimed at expanding and improving the opportunities provided through off-campus offerings in the conventional delivery mode.

2.2.7 University of Ottawa

The University of Ottawa provides distance learning opportunities through three delivery modes: correspondence courses, utilizing print as a primary medium supplemented by audio cassette, group tutoring where numbers warrant, and telephone tutoring; television courses, supplemented by print materials and teleconference tutoring; and teleconferencing courses, one of which was offered on an experimental basis in 1981-82. Ten courses were offered in the correspondence mode and four as television courses. Total enrolments in the 15 courses offered in 1981-82 were 96. In 1980-

81, there were 132 course enrolments in 16 courses; in 1979-80, 103 in 19.

Courses are developed by regular faculty members, generally beyond their normal teaching load. Teaching departments are responsible for academic aspects of course delivery and the Department of Continuing Education for administration, publicity, and other aspects. Where numbers warrant, tutorial sessions are organized at certain off-campus locations.

Current plans do not give high priority to further development of correspondence and television courses. Existing offerings will be maintained until the departments responsible feel they are outdated. Expansion potential is foreseen for teleconferencing courses, particularly as an alternative to offering instructor-delivered classes at off-campus centres where enrolment is marginal.

2.2.8 Queen's University

The major distance education activity at Queen's University is the degree credit correspondence programme in the Faculty of Arts and Science. This programme has a long history with courses first offered for credit in 1889. For the past few years, the numbers of courses offered and course enrolments have been relatively stable. In 1981-82, 35 full courses and seven half courses were offered, drawing 825 course registrations.

For the current year (1981-82) and the past three, the primary delivery medium for all courses has been print. Supplementary audio tapes are available for many courses. Students have telephone access (collect) to instructors or markers. One or two tutorial sessions are held (usually in Kingston) over the course of the year. Attendance is not compulsory. All on-campus student support services are available to correspondence students, in person, by telephone or by mail depending upon the service and circumstances.

Most correspondence courses at Queen's have been developed by regular teaching faculty within regular teaching loads. A few have been assignments beyond load for which an overload stipend has been paid. Correspondence offerings are "integrated" with offerings in the conventional mode in each department. The preparation and maintenance of study guides and materials, the "teaching" of a course, supervision of markers, setting and grading of final examinations are all part of regular load. There are no editorial or instructional development staff involved in the preparation of courses.

Queen's University has neither acquired courses from other institutions nor has it sold courses. A 25-part videocassette series was produced under an agreement with the National Film Board but its use has been discontinued.

Under current resource constraints, the correspondence programme will likely remain at current enrolment and course offering levels. Were these constraints to be relaxed, a substantial increase in seen as feasible, to perhaps 3500 enrolments with expansion of course offerings to include Business and Commerce and the introduction of at least one more entry point. The University suggests that were there sufficient breadth and depth of offerings to permit degree completion and an effective advertising and promotional programme, enrolment levels would increase significantly.

2.2.9 Ryerson Polytechnical Institute

The Ryerson Polytechnical Institute offers a number of credit courses and two career educational programmes in a distance education mode. Credit courses are coordinated and administered by the Office of Distance Education of the Continuing Education Division. The Distance Education Office is a separate budget unit and is responsible for all expenses related to course development and operations. The Office registers students, handles assignment flow and maintains record systems.

Twelve credit courses were offered in 1981-82, for which the primary delivery medium was print. Audio tapes were supplementary in four courses. Course enrolments averaged 16 per course for a total of 195 in the 12 credit courses.

Course authors and tutors are drawn, wherever possible, from regular teaching faculty. In some instances where a faculty member is not available, an external consultant may be engaged to develop a course.

Tutorial services are provided via telephone on a call collect basis. Academic counselling is available through the department offering the course.

Ryerson is participating with TVOntario and a number of other Ontario universities in the development of a telecourse on Energy.

With respect to longer-term development, Ryerson has made an assessment of the potential for distance education and has a policy providing for the organization and funding of distance education activities, designed to facilitate both internal coordination and cooperation with other institutions and organizations.

2.2.10 University of Toronto

The University of Toronto does not currently provide distance education courses in credit areas. There is, however, a substantial independent study programme offered through the School of Continuing Studies. Many of the 60 courses currently offered are recognized by professional associations for their own accreditation/certification requirements. Enrolments have stabilized at a level in excess of 4000 per year for the past few years.

The University of Toronto has a substantial potential in distance education, particularly in professional continuing education areas. The University does not appear to have plans for development of distance education offerings in the credit arena.

2.2.11 Trent University

There is no distance education activity at Trent University and no current plans for establishing an involvement in this area.

2.2.12 University of Waterloo

Since 1968 when the University of Waterloo introduced a series of taped "off-campus" courses in Physics, the University's correspondence programmes have grown to the extent that it is now possible to complete the requirements for four undergraduate degrees solely by correspondence: Bachelor of Arts, Bachelor of Environmental Studies (Geography), Bachelor of Mathematics, and Bachelor of Science (General Science). Some correspondence courses are available from the Faculty of Human Kinetics and Leisure Studies and four Engineering courses are offered. Courses are available during each regular term (Fall, Winter and Spring) with demand being the determining factor in the availability of a specific course in any term. Correspondence courses may be combined with day or evening on-campus or off-campus centre courses to fulfill other degree requirements.

Responsibility for the development and promotion of the Waterloo correspondence programme resides with the Office of Part-time Studies and Continuing Education. Since correspondence teaching has been integrated into regular teaching, course development and maintenance responsibility rests with each Faculty. A central Correspondence Office, under the supervision of an Associate Registrar for Part-time Studies, has responsibility for registrarial functions, course materials distribution, assignment processing and examination administration. This office oversees the technical production and assembly of materials and copyright administration. Marking and tutorial support is a Faculty responsibility.

Course offerings have grown from 189 in 1978-79 to more than 280 in 1981-82. Enrolments have grown even more rapidly from 8130 in 1978-79 (30 course enrolments per course) to over 15,000 in 1981-82 (43 course enrolments per course)

All courses are delivered via audiotape cassettes together with supporting textbooks, notes, study guides, slide sets, etc. Tutorial support is provided by the instructor responsible for course delivery and is provided in the form of tutorial tape responses to completed assignments and by telephone at any other time. Study Skills tapes are available for purchase by students and counselling is available from a Mature Student Coordinator's office or from Faculty personnel. The potential of teleconferencing is under examination as a means for providing "live" tutorials on an interactive basis.

With respect to potential for expansion, the Waterloo programme is expected to grow at at least the same rate as adult education across the Province, i.e. at about 15% per year, for the next few years. At this rate, an enrolment level of more than 25,000 course enrolments will be reached in 1985-86. Potential for expansion of offerings exists among several on-campus programmes where professional groups would be attracted to the flexibility of a correspondence programme. Teleconferencing is also seen as having the potential for use in delivery of honors and graduate programmes. Additional resources will enable expansion of Computing Science offerings. Even with current resource constraints, the Waterloo correspondence programme is expected to grow significantly over the next few years.

2.2.13 University of Western Ontario

Distance education courses at the University of Western Ontario are developed and delivered under the auspices of the Faculty of Part-time and Continuing Education. In 1981-82, 36 courses were offered, all creditable toward a Bachelor of Arts degree. Most of the courses offered in 1981-82 were print-based (i.e. the printed medium is the primary delivery medium), six (of a total of 36) are print-audio combinations, three utilize audio-tapes as a secondary medium, and one course is an audio-tape based course using print as a secondary medium. While the number of course offered has not increased dramatically in the past few years (30 courses offered in 1978-79), enrolments have increased from 327 in 1978-79 to 608 in 1981-82.

For development of new courses for distance delivery, the Faculty of Part-time Studies solicits proposals from academic departments, which retain ultimate academic authority for the course and its delivery. Course design must meet both the requirements of the offering department and the standards of the Faculty for development to proceed. Both the development of courses and the instructional activity associated with delivery are undertaken by faculty members on an overload basis. Costs are borne by the Faculty of Part-time Studies.

Tutorial services at Western are generally provided by the instructor via correspondence and telephone. Some courses offer tutoring on audio tape. On occasion, instructors will arrange on-campus or remote-site tutorials for groups of students wishing to attend. Counselling services are provided by telephone and by counsellors who travel to the University's 18 extension centres.

Potential for expansion is seen to extend to some 200 courses in Arts and Sciences, as well as service courses from other Faculties, providing a full array of courses to those seeking the B.A. Enrolment potential is estimated to be 6000 course registrations with courses delivered via a combination of print, audio-tape and teleconferencing.

2.2.14 Wilfrid Laurier University

Wilfrid Laurier University offered 14 distance education courses in 1981-82. Two were offered in 1978-79, six in 1979-80 and seven in 1980-81. All are telecourses, i.e., correspondence courses with a television component and each must be part of the official curriculum of credit courses approved by the Senate of the University. The preparation of a course for "Telecollege" is the joint effort of a faculty member, the Office of Part-time Studies and A/V Services. The television components of courses may be produced internally or acquired through TVOntario. Where courses are produced internally, the instructor involved is on assignment beyond normal teaching load. All development costs are borne by the Office of Part-time Studies. Six courses have been acquired from external sources (four from Laurentian University and two from Coastline College) and one course is used by another institution (Laurentian University).

Courses produced by WLU are broadcast on TVO-2, the Ontario Educational Communications Authority (TVOntario) repeat channel provided by Canadian Cablesystems. TVOntario maintains a broadcast network, TVO-1. Courses which use TVOntario video components are shown on TVO-1.

Enrolments in Telecollege courses have increased roughly in proportion to the numbers of courses offered, from 20 in 1978-79 to 300 in 1981-82.

A unique and important feature of WLU's Telecollege is the approach taken to tutorial support. At least once per term (and often more frequently) instructors hold tutorial sessions in Waterloo and at Brampton, Oshawa and Barrie, depending upon the local volume of registrations. Attendance is not mandatory, but a high proportion of students attend. The sessions provide an opportunity to meet with the instructor and other students and to discuss overall approaches and reactions to a course. Academic counselling is available (toll free) by telephone and tutorial assistance is available by telephone and in person.

Significant expansion is foreseen with the existing B.A. programme base and an approved development plan calls for the introduction of some 20 additional courses by 1985-86, including offerings in the Business

Administration area. Enrolments are expected to increase to more than 1000 over the same period.

2.2.15 University of Windsor

The University of Windsor offers university level study opportunities to part-time students through five off-campus centres. Although the conventional instructional approach is employed, there is an increasing use of media in both on-campus and off-campus instruction.

Some review of distance education potential has been undertaken but it would appear that start-up costs exceed the revenue increases that the additional enrolments thus attracted will generate.

2.2.16 York University

Although York University does not currently have an involvement with distance education programming, the University has an effective part-time studies programme, a number of Faculties have off-campus courses and field service interests, and there would appear to be significant enthusiasm for involvement, perhaps in collaboration with other institutions in this area.

2.2.17 Summary of Current Involvement

A summary indication of current university involvement in distance education, and of delivery and tutorial modes, is provided in Table 2. Enrolment data for the 1979-80 to 1981-82 period are summarized in Table 3. At the time of reporting, complete data for 1981-82 were not available. Thus 1980-81 totals are used elsewhere in this review.

TABLE 2

CURRENT UNIVERSITY INVOLVEMENT IN DISTANCE EDUCATION

University	Credit[1] Courses (1980-81) Full	Credit[1] Courses (1980-81) Half	Non-credit Courses (1980-81)	Delivery Media[2] Print	Delivery Media[2] Radio Audio	Delivery Media[2] Video TV	Delivery Media[2] Tele Conf	Tutorial[3] Mode
Brock	-	-	-	-	-	-	-	-
Carleton	8	3	-	S	-	P	-	C,I
Guelph	-	-	70	P	-	-	-	T,C
Lakehead	-	-	-	-	-	-	-	-
Laurentian	41	15	x	P	-	S	-	C,T
McMaster	-	-	x	P	-	-	-	I
Ottawa	2	14	-	P	-	S	-	I
Queen's	41	7	x	P	-	-	-	T,I
Ryerson	-	11	15	P	X	-	-	T
Toronto	-	-	60	P	-	-	-	C
Trent	-	-	-	-	-	-	-	-
Waterloo	10	215	3	S	P	-	-	T
Western	30	4	-	P	-	S	X	C,T
Wilfrid Laurier	-	7	-	S	-	P	-	I,T
Windsor	-	-	-	-	-	-	-	-
York	-	-	-	-	-	-	-	-
Total Credit Courses	132	276						

Notes: 1. Courses offered for credit toward degrees.

2. "P" indicates primary delivery medium, "S" indicates secondary and "X" indicates use in some courses.

3. "C" indicates correspondence mode, "T" indicates telephone access and "I" indicates in-person through meetings, seminars and/or group tutorials.

TABLE 3

SUMMARY OF DISTANCE EDUCATION ENROLMENTS

	Credit Course Enrolments[1]			Non-Credit Course Enrolments		
University	79-80	80-81	81-82[2]	79-80	80-81	81-82[2]
Brock	-	-	-	-	-	-
Carleton	264	159	168	-	-	-
Guelph	-	-	-	5 177	5 988	7 076
Lakehead	-	-	-	-	-	-
Laurentian	1 189	1 159	1 393	-	-	-
McMaster	-	-	-	-	-	-
Ottawa	57	68	67	-	-	-
Queen's	810	649	786	-	-	-
Ryerson	68	108	98	801	647	242
Toronto	-	-	-	4 193	4 595	2 884
Trent	-	-	-	-	-	-
Waterloo	4 803	6 758	7 737	274	458	266
Western	340	439	580	-	-	-
Wilfrid Laurier	81	52	235	-	-	-
Windsor	-	-	-	-	-	-
York	-	-	-	-	-	-
TOTALS	7 612	9 392	11 064	10 445	11 688	10 468

Notes: 1. Expressed as full course equivalent enrolments.

2. Preliminary enrolment data. Summer 1982 enrolments not included for Carleton, Ottawa, Ryerson and Waterloo.

2.3 Other Organizations

2.3.1 The Ontario Educational Communications Authority/TVOntario

As underscored in the introductory statement describing the process by which this review was conducted, TVOntario and the Ontario Educational Communications Authority as the authority under which it operates, have a major involvement in distance education activities in the Province. This involvement is so central to this review that we have included in Appendix 10.3 the most recent summary of current TVOntario distance education activities as prepared by Waniewicz. Suffice to say here then that TVOntario, working with an informal grouping of universities, is convinced that the opportunity for extending service and the capacity to do so exist within the university system in collaboration with TVOntario. It should also be noted that TVOntario has run the successful Ontario Academy programmes for a number of years. The Academy is described more completely in Reference 8.56.

TVOntario maintains a broadcast network (TVO-1) which reaches all areas of the Province. A repeat channel (TVO-2) is provided by Canadian Cable systems but this facility does not have complete Provincial coverage.

2.3.2 The Ministry of Colleges and Universities

Although no explicit policy statement devoted exclusively to distance education was uncovered in our review, the position of the Ministry as indicated by its officials, and publications, would seem to be generally supportive of this activity. Officials of the Ministry were particularly helpful in tracing the history of involvement of the Ontario post-secondary educational system in distance education through the development of the Open College and noted as well the significant contribution made by the correspondence education section of the Department of Education. However, probably the clearest documentation of our assertion that the Ministry is in support of distance education developments is found in the following reports: (1) a study completed by the Levy-Coughlin partnership under contract to the Ministry (Reference 8.22); (2) the report of the Committee on the Future Role of Universities in Ontario, issued in 1981 (Reference 8.30); and (3) the report entitled "Continuing Education: The Third System - A Discussion Paper"

(Reference 8.33). For example, the report on the future role of universities notes in its conclusions and recommendations that "accessibility to Ontario universities should be improved to meet the needs of those groups in our society which are not yet adequately served". Similarily, in discussing barriers to part-time education, the Levy-Coughlin report notes the following:

> "Although the universities are autonomous from the Ministry and from each other, concern was expressed that Ministry policy for part-time education was too general and required more specific guidelines and encouragement - especially with respect to innovative offerings to part-time study (distance education, off campus centres, new education technologies such as Telidon). The organization of more formalized inter-university cooperation in these areas would be a fruitful topic of discussion in the appropriate bodies which now exist."

Finally, it can be argued that the basic proposition of the document entitled Continuing Education: The Third System is that educational opportunity for adults and in particular the adult student studying on a part-time basis ought to be enhanced. This, we suggest, is at least indirect support for distance education development.

In short, although we chose not to approach the Ministry with a request for information in the form used to gather data from the Universities, we see no obvious policy barriers to developments in distance education and indeed find a considerable degree of support for it by Ministry officials. This observation notwithstanding, we have no basis for assuming that the Ministry would be prepared to award significant additional resources to the university system in order to allow or encourage it to engage in such activities.

2.3.3 The Ontario Council on University Affairs

As in the case of the Ministry, information obtained with regard to the position of the OCUA on distance education in Ontario universities suggests what might be described as qualified support. While recognizing the important additional capacity that distance education techniques present with regard to the extension of educational opportunity, the Chairman did not consider it likely that the Council would support a request for special additional funds for distance education. It was also noted that the record established by the universities of Ontario suggests that cooperation in which there is any real relinquishment of sovereignty is likely to be difficult to achieve. Moreover, in the view of the Chairman, the university community in Ontario has many higher priorities than some grand centralized coordinating mechanism for distance education. This having been said, he also noted that with the major facility and competence provided by the OECA through TVOntario, there is clearly an opportunity for the universities to do more than is now being done.

2.3.4 The Open College/Open College/Ryerson

Open College has been offering educational programmes by radio for more than a decade. The College's objective is "to broadcast informal programmes and credit courses which will satisfy community needs and help our listeners further their educational goals." The programmes at Open College are made available through one hour radio broadcasts available in afternoons, evenings and on week-ends. For areas not receiving the radio signals, the programmes are available via audio cassettes. The radio broadcasts are supplemented by written materials and textbooks and each Open College registrant is assigned a tutor. In addition, there are usually face to face study sessions in Toronto on the campus of Ryerson Polytechnical Institute.

Those responsible for the developments of the Open College see the curriculum as primarily designed to provide an opportunity for entry or re-entry into the post-secondary educational system. Thus the courses are deliberately chosen "because of their lively topical content and their transferability to a wide range of university programmes." They are available to anyone who chooses to register for a course. The courses have particular relationships to programmes at Ryerson, and at Atkinson College of York University.

2.4 Financial Considerations

Information with respect to the costs of current activities was obtained from seven of the eight institutions which offer distance education programmes in the university credit area. As requested (see Appendix 1), these institutions provided estimates of direct costs for course development activities and, separately, for programmes and services delivery.

Development Costs:
Development costs have been defined to include salary costs (academic, editorial and/or instructional development), copyright and permission fees, and the supplies, materials and services costs that can be attributed to the production of the "master" copy of the course materials. For a print or audio-tape based course, the estimates of development costs obtained from the responding institutions range from just under $3000 to approximately $20,000 per course on average. At the lower end of the range, the costs reported do not include academic salaries where courses are prepared as part of a regular teaching load. In those cases where a direct salary cost component is included, it is typically equivalent to an overload teaching stipend (i.e., in the order of $2000 to $3000 per course).

In academic productivity terms, the preparation of a distance education course is considered to be equivalent to teaching a conventional course of similar level and credit value. Thus, a reasonable estimate of the average direct cost of a print or audio-tape based course, including a full direct salary component, is in the $15,000 to $25,000 range. Where instructional television is a primary delivery medium and/or video production is involved, development costs are higher with institutions using this medium reporting direct cost estimates in the $40,000 to $50,000 range.

Delivery Costs:
Delivery costs have been defined to include materials reproduction costs, postage, telephone tolls and other communications costs, tutorial costs, marking costs, etc. The estimates reported range from $60 to $325 per course enrolment including these and similar elements. As with development costs, at the lower end of this range the reported costs typically do not include a salary costs component either for the academic staff input or, in many cases, for the support staff effort involved in delivery. A reasonable estimate of the average delivery cost per course, taking into account the human resource input, is in the order of $200 to $300.

Institutional Costs, Indirect Costs and Overheads:
Without full cost study information for each of the universities involved with distance education it is

impossible to accurately determine the level of institutional, indirect and overhead cost associated with current activities, and such an examination is clearly beyond the scope of this review. Even with this information, the determination of relative expenditure is likely to reflect the process by which costs are allocated as much as the real cost. Nevertheless, marginal analysis of the costs of distance education activity may lead to erroneous conclusions regarding cost effectiveness and, therefore, some estimate of institutional, indirect and/or overhead costs should be made.

Cost studies at Athabasca University (Alberta) indicate that direct costs account for 60% of total costs. Using this experience, a "gross-up" factor of 1.67 might be applied to the direct costs yielding unit cost estimates of $25,000 (half course) to $40,000 (full course) for development of print and/or audio-tape based courses, $67,000 to $84,000 for television courses and $350 to $500 for delivery.

A Simple Cost Model:

Another means of expressing the costs of current activities is through the use of a simple cost model of the form:

$$TC = ax + by + cz + d$$

where TC = Total cost
a = Initial development cost per full course equivalent (f.c.e)
b = Maintenance and/or replacement cost per full course equivalent
c = Delivery cost per full course equivalent enrolment
d = Institutional, indirect and/or overhead costs
and x = Number of new full course equivalents added to offering
y = Number of existing courses (i.e., developed in prior years)
z = Number of full course equivalent enrolments

For simplicity, maintenance costs will be assumed to be 20% of initial development costs. This is equivalent to assuming an average five year lifetime over which the course is periodically updated or after which the course is replaced. Also, cost coefficients will be adjusted to include overheads.

Using upper-range values for the cost coefficients:

$$\begin{aligned} TC &= 40{,}000 + 8000y + 500z + 0.4TC \\ &= (40{,}000x + 8000y + 500z) / 0.6 \end{aligned}$$

Since cost data are not uniformly available on a term course vs. full course basis, the upper-range values are used as reasonable approximations.

In 1980-81, some 38 full course equivalents were added to a 1979-80 total of 232 and the total offering drew roughly 9400 course enrolments. From the simple model, the total cost can be estimated to be in the order of $8,100,000 for an average cost per course enrolment of approximately $860.

3. ASSESSMENT OF DEMAND AND POTENTIAL

3.1 Nature and Definition of Demand

Students attracted to the distance education mode of study are a diverse group. Nevertheless it is possible to describe some general characteristics.

A higher proportion of women are attracted to distance education opportunities. The age distribution of the student group is similar to that of the general population with the largest proportion in the 25 to 44 age range. Many have some university education, some hold degrees, and most have some post-secondary education experience.

Three reasons are most often cited for pursuing university study. Career advancement is the most frequent motivation. Educational objective is important, particularly pre-qualification for professional and/or graduate study. Finally personal objectives, such as intellectual stimulation, recreation, etc. are cited as reasons for participation.

Among the factors related to the choice of the distance education mode the most significant is the opportunity to combine study with full-time occupation particularly for those for whom economic, geographic, or domestic circumstances do not permit attendance in the conventional mode.

These factors taken together suggest a large and increasing group who could be served by distance education offering of university programmes. However a relatively comprehensive programme offering is necessary to attract large numbers of students.

3.2 Estimates of Demand

Any attempt to produce precise quantitative estimates of potential for growth and/or expansion of distance learning programmes is hazardous given the nature of the data that have been gathered in the course of this review. Data limitations notwithstanding, the authors are not aware of practical models or methodologies which enable reliable estimates of demand for distance education offerings. Nevertheless, we believe there to be significant potential for growth in enrolments in existing programmes at Ontario universities. Indeed, the plans for expansion of offerings or improvement of delivery systems at some institutions and for the implementation of new distance education activities at others, lead us to conclude that enrolment growth is inevitable.

In 1979-80, 234 term courses (half courses) and 115 full courses drew 9700 and 2750 enrolments respectively for a full course equivalent enrolment of 7600. By 1981-82, course offerings increased to 331 term and 131 half courses; enrolments to 15,600 (term) and 3270 (full) for a full course equivalent total of more than 11,000, excluding Spring 1982 enrolments for some institutions. These increases reflect rates of growth of more than 20 percent per year. Given the expansion of offerings planned by a number of universities and the schedules introduction of a programme by at least one institution not currently active in the university credit area, we believe that 30,000 full course equivalents is a reasonable estimate of total system enrolments in the short run (three to five years).

At a level of 30,000 full course equivalent enrolments, some 40,000 to 45,000 adult Ontarians would benefit from university educational programmes delivered by distance education techniques. Ontario's adult population is nearly six million in 1980 and is not expected to increase significantly by 1985. An increase in participation from the 1980-81 level of approximately 0.25 percent (13,400 term course enrolments, 2700 full course enrolments) to the 0.65 to 0.75 range (a 40,000 to 45,000 enrolment level, 30,000 full course equivalents) is entirely within the realm of possibility.

A regional distribution of this enrolment level is shown in Table 4 incorporating the assumption that participation rates will not be significantly different in "rural" and "urban" reas. This assumption is born out in experience in other jurisdictions. At the same time, since most distance learners are part-time learners, it is important to note that demand for distance learning opportunities will quite obviously be related to and affected by the options available for part-time study. Thus, the part-time student pursuing educational goals in the richly served regions of southern Ontario might find it possible to have all of his/her educational needs met by courses and programmes offered in the conventional mode. One would speculate that the demand for distance learning opportunity might be less for such people than for those, say, in remote northern regions for whom no such options exist.

TABLE 4

POTENTIAL ENROLMENTS IN CREDIT COURSES

Region	Universities[1]	1980 18+ Population[2]	Credit Enrolments[3] (1980-81)	Enrolment Potential[3]
Eastern	Carleton Ottawa Queen's	869 000	876	4 500
Central	Guelph Ryerson Toronto Waterloo Wilfrid Laurier	3 603 000	6 918	18 400
Southwestern	Western	884 000	439	4 500
Northeastern	Laurentian	356 000	1 159	1 800
Northwestern	Lakehead	144 000	-	800
		5 856 000	9 392	30 000

Notes: 1. Excludes universities not currently involved in distance education delivery.

2. Population of age 18 years and over.

3. Expressed as full course equivalent enrolment.

3.3 Potential Costs

In section 2.4 we demonstrated the use of a simple cost model as a means for attributing costs to the current (1980-81) level of distance education activity in the Ontario university system. This model can be used to estimate the cost impacts of growth and to illustrate the sensitivity of costs to changes in at least one critical variable.

Using the same unit costs ($40,000 for initial development, $8000 for maintenance and $500 for delivery), the estimated cost of providing service to 30,000 full-course equivalent enrolments is $20,400,000, on the assumption that 80 full course equivalents are added to the 1980-81 level of offerings. As the data in Table 5 will indicate, such an expansion would result in a significant decrease in average cost, provided that a substantial increase in average course enrolments (enrolment ratio) can be achieved.

3.4 Perhaps the most important point to underscore with regard to estimates of demand and potential costs is our conviction that the current success of distance learning programmes at a number of Ontario universities, coupled with the results of TVOntario and other surveys, lead to the inescapable conclusion that there are significant numbers of adult Ontarians seeking this educational opportunity. Significant enrolment growth is likely to be a major consequence of any actions taken to increase breadth or depth of course offerings or to improve delivery mechanisms. The associated costs and the potential for increased cost effectiveness are issues which need to be recognized and considered as actions are taken.

TABLE 5

POTENTIAL COSTS OF ENROLMENT GROWTH

	Full Course Equivalent Enrolments	Full Course Equivalents	Enrolment Ratio	Total Cost	Average Cost
Current (1980-81) Offerings	9 400	270	35	$ 8 100 000	$ 860
Expansion	20 600	80	260	12 300 000	600
Total	30 000	350	85	$20 400 000	$ 680

4. REVIEW OF SELECTED LITERATURE

A number of students of distance education have recently commented on the question of organization as it applies to the development of educational materials and to their delivery through distance technology. In the review that follows we have summarized those that seemed most relevant to the particular concerns of the Ontario university system. As noted earlier, the bibliography (Section 9) includes a more comprehensive identification of major elements of the literature of distance education.

The lack of unanimity about the terminology used in distance education and the confusion about the place of distance education within education as a whole are addressed in a constructive manner by Keegan in a paper on definition in distance education which appeared in the inaugural issue (March 1980) of Distance Education, the Journal of the Australian and South Pacific External Studies Association (Ref. 8.20). Keegan analyzes four definitions, choosing from them six components:

-- separation of teacher and student;
-- influence of an educational organization especially in the planning and preparation of learning materials;
-- use of technical media;
-- provision of two-way communication;
-- possibility of occasional seminars;
-- participation in an industrialized form of education.

These six, he concludes, are essential to a comprehensive definition of distance education.

Keegan is also one of several authors who address organizational issues in a 1982 publication edited by Daniel, Stroud, and Thompson, Learning at a Distance: A World Perspective, Athabasca University, Edmonton, 1982 (Ref. 8.13). On the basis of his six element definition he reviews four basic models:

The correspondence school model in which there is a heavy reliance on the postal service and printed materials; the multimedia system which extends the range of media used to provide educational materials and often includes face to face situations; the consultation model which attempts to integrate face to face contact with materials made available for study at home whether through print or other communication devices; and the integrated model in which distance learners are kept parallel with a group of on-campus students and progress is "monitored against the on-campus students". Regrettably, although he is optimistic in his review of trends in distance education, Keegan does not assess or provide criteria for evaluation of the four basic models that he defines.

Although somewhat obliquely, James Draper of OISE presents some "perspectives of the 80's" with definite suggestions for the organization of distance education. Draper speculates that:

1) "whereas distance education has been traditionally thought of as an individual enterprize, it will increasingly involve groups learning together, creating a support system;

2) there may be greater sharing of resources, for instances, inter-library loans, and inter-agency cooperation;

3) traditional institutions are likely to become more involved with problem solving and community service, working directly with people in community settings, linking research and action;

4) distance learning will continue to serve an expanding clientele including business, labour and other community groups."

Illustrating that cooperation between universities is possible even when national boundaries are involved, Luis Nicolini describes "the Capricorn interuniversity programme (PIUTEC)" which, "is a cooperative venture of universities located in the Capricorn tropic area of Latin America." The objectives of this programme are to extend educational opportunity through distance techniques by offering refresher and graduate courses, exchanging teaching staff, technicians and specialists, sharing information about courses, fellowships, research results, and other activities in distance education, providing beginning and in-service training of staff, publishing specialized materials designed to increase communication, maintaining the documentation centre and data base and "development of common standards for design, production and co-production and distribution" of distance education materials. The rationale for attempting to bring universities in Argentina, Bolivia, Brazil, Chile, and Paraguay together sounds remarkably apt for the current efforts in Ontario. "The programme arose from the desire of several countries in the region to pool resources in a cooperative project." Based on successful examples on this kind of approach in industry and tourism the distance education project thus far has established a network of co-ordinators who meet annually and exchange information, has developed the documentation and information centre at the University of Northern Chile and has established a research centre on distance education projects at the Universidad Catolica Boliviana.

In a progress report to the June 1982 meetings of the International Council on Correspondence Education, Ruud de Moore of the Tilberg University in the Netherlands describes the development of a new independent open university devoted exclusively to distance education in that country. While candidly admitting that recent elections in which the government of the day was changed may cast in doubt his optimism about the future for this institution, he describes a number of the facets of the planning for that university that seem relevant to thinking in Ontario. In 1977, the government of the day prepared a white paper which promoted the creation of a Netherlands Open University with primary policy objectives as follows:

> "greater equality of educational opportunity for adults, a decrease of enrolments in the existing higher education institutions, a reduction of cost per student and innovation in teaching and curricular development."

Noting that the idea of an open university was criticized by both the federation of Dutch trade unions and the Council of Education (a key advisory group composed of representatives of the existing educational establishment) and that higher education teachers have major reservations about the techniques of distance education, the government nevertheless went forward with planning and created the institution. The new institution will integrate the university and college or vocational sectors of post-secondary education and will in theory make it possible for every applicant over eighteen to be admitted. The institution will not offer pre-determined programmes of study but will permit students to combine courses into programmes of their own choosing, degree of specialization and orientation. The new university anticipates a staff of some 130 academics when operating at full strength, with something less than half of these employed by the Open University and the remainder seconded for one to two year periods under contract to assist in the preparation of educational materials. The committee planning the new institution elected not to create a separate department within the university for the production of audio-visual media and their distribution. Rather they anticipate making use of organizations in the Netherlands (Teleac and Stichting Film en Wetenschap) who it is anticipated will "contribute their expertise to the course development teams of the open university."

Guiton, at Murdock University in Australia, notes at the outset of his paper that "despite any costing formula, resource allocation within universities eventually becomes a political process." He proceeds to review prior analyses of costs in distance education operations including studies by Snowden and Daniel at Athabasca University (Ref. 8.47) and concludes that while helpful and sensible, prior studies have not been applicable to those universities that operate with full on-campus and external or distance education programmes. He concludes that

> "the economic analyses of single mode open universities have shown that the true cost of distance education can be examined only when the terms of reference are properly defined. In two mode universities we have a structure which is highly appropriate for small student populations particularly where students may wish to move between on-campus and off-campus study".

Guiton then proposes a formula for estimating the cost of distance education operations in "two mode" universities which includes the following three elements: course related costs (the additional fixed costs of external mode course preparation and maintenance); student related costs (the variable costs resulted from tutoring of enrolees); institutional costs (that share of university services, academic services and student services attributed to enrolments in the external mode). Despite his conviction that the formula which incorporates these three elements will provide for a more accurate assessment of the real costs of distance education operations in conventional universities, Guiton concludes that "within such a structure resources, like information, rarely flow - they have to be pulled".

Hjalmar Rende of the Norwegian State Institution for Distance Education describes an organizational alternative for the provision of distance education services which moves away from the single independent institutional pole toward the development of structures for coordination or cooperation among existing institutions. As the author notes, the Norwegian State Institution for Distance Education

> "has the task of establishing the main guidelines for the academic/technical material, the pedagogical approach and the financial structure. The actual production of teaching aids in the organization of correspondence teaching and local facilities are to be carried out in cooperation with others. The NFU has often been described as a switchboard for this reason".

Although the experience to date is limited, Rende notes in an attractively candid observation that

> "in the nature of things most independent institutions and organizations prefer the freedom to make their own decisions whereas the working model calls for the development of teaching aids in accordance with guidelines provided from outside. This is a challenge in cooperation both for the "switchboard" and the individual cooperating partner. So far our experiences have been favourable, but certain adjustments will probably have to be made before it can be said that Norway has discovered the best way for state sponsored distance learning to be planned, produced and implemented".

In what may provide some leads for the continued development of effective working relationships with the OECA, Rebel describes "a cooperative model for distance studies" in West Germany. He argues that West German institutions of higher learning will have to find answers to the following challenges, "if necessary in cooperation with radio and television stations, institutions of adult and distance education etc.:

1) To improve the job placement chances of their graduates, they will have to develop profession orientated programmes especially to provide additional qualifications for students who left university some time ago;

2) to cater to those students, they will have to develop part-time study programmes that allow students to continue their professional or occupational activities;

3) to allow people occupational flexibility they will have to implement the concept of life-long education, i.e. the possibility of beginning and resuming general, political, or professional/vocational studies at any time;

4) to create a better balance of job chances among the generations they will have to make access to their programmes easier for older people;

5) to avoid the scissor effect between educational and occupational systems and eliminate the bottleneck of one qualification for one job, they will have to develop study modules which can be used to flexibly meet new needs within a relatively short time. These study modules should be structured so that they can be combined with other modules, possibly from other institutions, including distance study programmes. They have to be recognized by other institutions. Examinations should be of the same standard as conventional ones, although procedures should be adapted to the special situation of the students;

6) to take into account changes in the learning habits of the West German population (i.e. the influence of mass media; people accustomed to visual learning; changed motivational structure; orientation to practical needs etc.) they will have to use modern approaches including new media, multimedia packages and a combination of multimedia distance education study units with conventional instruction".

Rebel notes that the citizens of West Germany have the opportunity to study at a distance through: (1) limited arrangements emerging from conventional colleges and universities; (2) the West German state supported university devoted exclusively to distance education (the Fernuniversitat); or (3) through arrangements coordinated by a new organization with the label DIFF. In essence, a consortium, DIFF was founded in 1967 and financed initially by the Volkwagen Foundation. It now obtains its resources from the several West German states and the federal government. Some 120,000 people have been served by DIFF, most of them teachers or student teachers. Typically, a partner institution "first organizes a course and members of the target groups may then apply to this institution for admission." DIFF also cooperates with radio and television stations offering ccurses that are open to anybody capable of receiving them. Some 350,000 people have taken part in such courses. Finally, Rebel notes, a branch of DIFF provides courses through the newspaper. To date some 200 newspapers throughout the country have provided such courses to in excess of 30,000 persons. In a role not unlike that of TVOntario, Rebel points out that "DIFF is mainly engaged in providing its partner institutions with printed and audio-visual study materials and advice besides doing research". DIFF is not operating the courses nor does it credit or accept responsibility for assignments or evaluation. Using the Radio College courses as an example, Rebel notes that such courses are "planned, developed, implemented and evaluated under the common responsibility of six radio stations, the Ministries of Education of six states, the top coordinating institutions of adult education in the six states, the representatives of the six university chancellor/rector conferences and DIFF." In an overview statement that requires considerable examination, he concludes that

> "all partners in the radio college planning body are equal and share responsibility and costs for the projects as a whole. Each has certain special obligations and responsibilities; the radio stations for the radio broadcasts; DIFF for the print media, evaluation and research; the Ministries of Education and the Universities for the examinations; the adult education institutions for the tutorials."

He concludes that this is a good example of effective cooperation and that the key in principle is "the division of work, costs and responsibility, with the necessary common planning and coordination and a minimal of institutionalization." It would be nice to have an operational plan for implementing this optimism in Ontario.

On the basis of provincial government and Athabasca University experience in the Province of Alberta, the Crawfords propose a "multipurpose educational network development" (MEND) with the challenge to:

1) "assemble the physical and human components for an interactive educational network;
2) coordinate the institutions and agencies wishing to use the network in providing educational services;
3) establish local facilities for interaction among people, common technologies and learning resources;
4) market existing programmes and services and assess needs for new programmes and services."

They suggest that MEND would have as its initial task the establishment of the network after which time, ideally, resources devoted to it could be reduced to a maintenance level. They suggest as well that all of the essential ingredients for this network are now in place in Canada and feel that resistance is likely based on the well known phenomenon of jealousy of institutional sovereignty, the limited financial resources of single institutions to finance system implementation, the absence of particular human competencies within single institutions and the reluctance of government to provide the necessary financing. In their view MEND has the potential for solving most of these problems by initially leaving credit granting and credentialing with the individual institutions; through the network, providing an economically viable arrangement that may receive more government support in funding; and finally, providing the opportunity for the economic use of both electronic and human technologies.

Here again, despite the author's recognition of the absence of a blue print for implementation, we have to wish that they had provided at least some illustrations of detailed organizational and funding strategies.

Although maintaining an apparent neutrality, Potter at the University of Victoria in Canada provides a useful summary of the attributes of the single unique institution approach to the organization of distance education opportunities: clarity of purpose, high status, a unique organizational structure, the opportunity to establish its own reputation, a clear understanding by faculty members of what is expected of them. Potter then provides a list of questions that he argues all distance education institutions must address and that must be a part of any thinking related to the design of organizations for the provision of distance education services:

1) how can the educational needs of people in remote rural areas be assessed?

2) how do distance learners learn?

3) what are appropriate programmes?

4) who is eligible to take a distance course?

5) how will distance educators translate information only available in print based linear forms to the spontaneous and interactive electromagnetic media of the telecommunication systems?

6) what is the form and structure of distance education instruction?

7) how may institution-based distance educators improve the status of extension services?

8) what support services are required by distance educators?

9) how should distance courses be evaluated?

In a succinct presentation of the conventional educator's attitude, Mainusch of the University of Munster in West Germany admonishes distance educators not to be guilty of perpetuating an orthodoxy as rigid as that of conventional campus/classroom-based education. He concludes that we must continually remind ourselves that:

> "university education encompasses more than a narrow range of strictly scientific or technical skills, more than a repertoire of cognitive formulas and easily pigeon-holed information. No truly academic socialization can stop at this. It will forever remain incomplete if it does not stimulate the critical bent of the student's intellect and encourage a sound scepticism which explodes stereotypes, cliches, and pat solutions. This can only be effective through dialogue,

debate and personal interaction."

"Distance educators" Mainusch adds as a footnote to that polemic "must take off their rose-colored spectacles and give more room to the scientific virtues of soberness, rationality and self-criticism."

Shobe runs the parallel between the four basic components of the general systems model and the Athabasca University instructional systems model, effectively applying general systems theory to the distance learning arena. In a version of the familiar admonition "if you don't do it yourself, somebody will do it for you", Shobe concludes that

> "if systems approaches do not have a future in public distance education one might predict that the strengths which they give to the private distance educators will enable them to begin to overshadow the public institutions in the not too distant future. As the requirement to marry high technology instructional/information systems with the human/social needs of individuals increases, those institutions that are able to analyze, evaluate and respond quickly and efficiently to rapidly changing circumstances will gain the support of an increasingly demanding public. It is suggested that those organizations that have adopted effective systems analysis/design strategies as their fundamental operating mode will succeed best in such an environment."

TABLE 6

A COMPARISON BETWEEN A GENERAL SYSTEMS MODEL AND THE ATHABASCA UNIVERSITY INSTRUCTIONAL SYSTEMS MODEL

A generalized systems engineering model (adapted from Jenkins, 1976)	Athabasca University instructional systems model
1. System Analysis 1.1 Define the problem 1.2 Establish the system team 1.3 Analyze the existing system 1.4 Analyze the system's context 1.5 Define the objectives for the wider system (context)	1. Long-Range Institutional Planning
1.6 Define the objectives for the system itself 1.7 Define overall system performance criteria 1.8 Collect baseline data 2. System Design 2.1 Forecast environmental changes	2. Program Planning
2.2 Develop models/simulations 2.3 Optimize system design 2.4 Develop control systems 2.5 Assess system reliability 3. System Implementation 3.1 Proposal review/approval	3. Course Design
3.2 Production of intended product	4. Course Development 5. Course Production
4. System Operation 4.1 Initial use of product	6. Course Delivery
4.2 Evaluation of product performance	7. Course Evaluation
4.3 Modification to improve performance	8. Course Revision

Although addressing "programme availability and student needs in part time studies at Ontario universities", the 1981 report prepared for the Ministry of Colleges and Universities by the Levy-Coughlin partnership presented certain findings/interpretations that have clear organizational implications. For example, the authors note that given the independence of individual universities, "the organization of more formalized inter-university cooperation in these areas, would be a fruitful topic of discussion in the appropriate bodies which now exist". They also by implication support a different kind of organizational arrangement for the provision of distance education services given the "fear that many institutions will redirect their resources to protect the "core" of full time education." The report also suggests a rationale for the present review in advocating "an investigation of the efficacy of various modes of educational delivery including the various and developing methods of distance learning, new technologies, innovations in course format, etc." (Ref. 8.22).

Avon and Freedman, in a December 1981 report to the Committee on Post-Secondary Education Projects (COPSEP), outline four ways in which TVOntario has "encouraged the development of utilization of all MCU related series" (Ref. 8.4).

1) the encouragement of the development of telecourses with the television series;

2) the use of the MCU-sponsored series to enrich or supplement existing credit or non-credit courses;

3) the development of a consortia of participating institutions "around the MCU-funded acquisition";

4) the development of mechanisms for facilitating cooperation among institutions "at the very early stages of planning and production of new telecourse series".

This useful report also very briefly alludes to the existence of the "Advisory Group on University Programs" a group apparently established under the aegis of TVOntario for the purposes of advising on television needs in universities, on learning, design and utilization and on what such future planning and acquisition TVOntario may be engaged in.

In what has come to be seen as a major stimulus for the review being reported here, Baker conducted a feasibility study on the proposition for an "Ontario inter-university service to provide distance education credit courses". The purposes of the feasibility study were to:

> "identify several Ontario universities interested in investigating the possibility of setting up such a service in association with TVOntario; the development of an initial list of about thirty half-courses which could be offered; the identification of faculty members interested in preparing such courses and the production of a collection of preliminary course proposals which would describe the media and resources to be used to meet the methods of learning, evaluation and student faculty interaction."

In a June 1982 progress report on this feasibility study, Waniewicz notes that:

1) most senior administrators contacted supported the idea;

2) there was remarkable enthusiasm on the part of prominent faculty members about distance education,

3) there was minimal awareness of distance education throughout the world with the exception of the British Open University;

4) there were some "creative ideas concerning the type and format of the learning resource materials" emerging from faculty members.

Waniewicz indicates that subsequent reports will deal with these and other subjects in greater detail, but in the context of the present review, hopes that "the COU study will significantly enhance a cooperative approach to distance education in Ontario" and observes further that "The direction of further enquiries by TVOntario will to a considerable degree depend on the outcome of the COU study". Since it is clear that TVOntario ought to have a significant involvement in any organizational proposals that emerge from this review, it is instructive to note that despite their intention to look to the present review for guidance, TVOntario, according to Waniewicz, expects to continue research in the following areas:

1) continuous monitoring of needs and interests in various forms of life-long education;

2) the development of sample course material from which further enquiry could be conducted on such aspects as:
   - the content load and educational function of the various course components;
   - the educational potential and limitations of the particular media and their delivery methods;
   - the production and distribution requirements in terms of time, technical facilities, personnel, finance and organizational structure;
   - the possible modes of cooperation between the universities or their consortia and TVOntario;
   - funding possibilities. (Ref. 8.58)

A precursor to the TVOntario feasibility study was that of Rosensweig on behalf of TVOntario (July 1981) which surveyed distance learning programmes at Ontario Universities and concluded that

> "the success of telecourse efforts would be enhanced if they were offered within a context that offered a greater choice of courses and provided for degree completion. Cooperation among universities might be able to create such an opportunity without requiring that each institution expand its programme to accommodate the wishes of academically inclined students. Such cooperation has the potential of attracting noticeably larger number of students to future telecourse options." (Ref. 8.43)

As an outgrowth of developments over the last two years, supported by the Committee of Western Canadian University Presidents, the twelve Western Canadian Universities have created a loose structure described as "the Western Canadian Committee on University Distance Education". Although extraordinarily gentle in its terms of reference, this committee does provide some instruction for possible Ontario developments. The objectives of the committee are:

1) the encouragement of member institutions to co-operate in:

   a) the sharing of information about programme offerings, programme plans, and delivery systems;

   b) the sale and exchange of course materials according to their terms and conditions of use as specified by the source institution;

   c) the planning of new programmes and courses;

   d) the facilitation of the transfer of credit among institutions and the exploration of mechanisms through which to address other problems of credit transferability;

   e) the joint utilization of common course offerings;

   f) the exchange and secondment of staff among institutions.

2) the encouragement of economies in the use and distribution among institutions engaged in the development and delivery of distance education

3) the provision of a forum for the consideration of common problems facing institutions engaged in the development and delivery of distance education.

In an observation that clearly emerged from concerns of individual partners in this Committee structure, the authors note in a telling footnote that "it is understood that while no institution, by assuming membership in this committee, faces erosion of autonomy, membership implies a willingness to cooperate within the spirit of these objectives". It is the faith of those establishing this mechanism, which has been subscribed to by all twelve Western Canadian Universities, that "the establishment of such a co-operative mechanism will provide not only a sounding board for issues related to distance education, but also institute an on-going forum in which specific problems can be addressed and potential development can be undertaken".

To give an illustration of the operational detail that may surround this development, it should be noted finally that it is the intention of the Committee to convene for the first time in this form in the fall of 1982 at the University of Calgary. The tentative agenda for this meeting will include wrestling with the eternal problem of transfer of credit, copyright policy and issues in distance education credit banking, and the inter-relationship of universities and provincial communication agencies in distance education (Ref. 8.26).

The need for an informational data base for distance education administrators is examined and recommendations for design and implementation are offered by D'Antoni in a draft report entitled "Distance Education in Canada: The Need for an Information Data Base." The feasibility of using Telidon, Canada's videotex technology, is examined in the same author's M.A. thesis in which a prototype information exchange network is shown to be of benefit to educational administrators in the Ontario university system. (Ref. 8.12)

Blenkinsop in a January 1982 report to the Senate at Laurentian University recommends the creation of a committee with the responsibility to deal with:

1) the application of the Senate regulations pertaining to the development of media courses;

2) the revision of courses already developed;

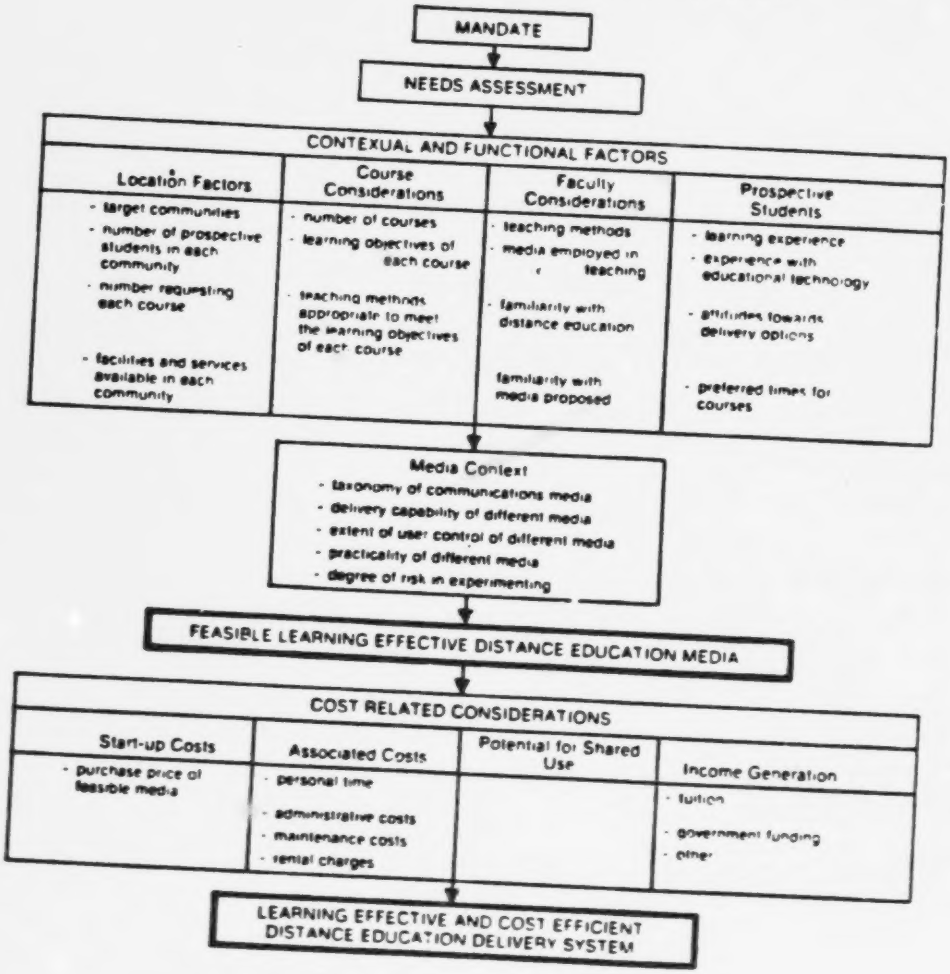
3) direction and support of those developing new courses.

This Committee would seem to offer some leads to cooperation both within and between institutions in Ontario (Ref. 8.5).

In an article titled "From the Quagmire to the Promised Land: The Unfinished Agenda of University Continuing Education in Canada", Guinsburg deals with the changing characteristics of the population and the need for response from adult educators. After identifying the issues associated with accessibility and constricted opportunity, Guinsburg notes that "part of the unfinished agenda of university continuing education in Canada will be greater collaborative efforts on a number of fronts, not the least of which is distance education." In making a plea for collaboration in a variety of continuing education areas, he asserts that "in distance learning, a collaborative consortium approach is the only way to go." (Ref. 8.15)

In an important paper describing procedures for "identifying an effective and efficient distance education system" Rogers at the University of Guelph proposes the scheme shown in Figure 2.

Procedure for Identifying a Learning Effective and Cost Efficient Distance Education Delivery System



MANDATE
NEEDS ASSESSMENT
CONTEXUAL AND FUNCTIONAL FACTORS
Location Factors
- target communities
- number of prospective students in each community
- number requesting each course
- facilities and services available in each community
Course Considerations
- number of courses
- learning objectives of each course
- teaching methods appropriate to meet the learning objectives of each course
Faculty Considerations
- teaching methods
- media employed in teaching
- familiarity with distance education
familiarity with media proposed
Prospective Students
- learning experience
- experience with educational technology
- attitudes towards delivery options
- preferred times for courses
Media Context
- taxonomy of communications media
- delivery capability of different media
- extent of user control of different media
- practicality of different media
- degree of risk in experimenting
FEASIBLE LEARNING EFFECTIVE DISTANCE EDUCATION MEDIA
COST RELATED CONSIDERATIONS
Start-up Costs
- purchase price of feasible media
Associated Costs
- personal time
- administrative costs
- maintenance costs
- rental charges
Potential for Shared Use
Income Generation
- tuition
- government funding
- other
LEARNING EFFECTIVE AND COST EFFICIENT DISTANCE EDUCATION DELIVERY SYSTEM

FIGURE 2

Although applied to the single institution, there are obvious leads to be found in this model for inter-institutional cooperation. Indeed Rogers notes that the June 1981 meetings of the Canadian Association for University Continuing Education passed a resolution calling for the establishment of just such an arrangement. "The idea was proposed to develop a mechanism whereby universities involved in distance education could be aware of courses developed by sister institutions and when appropriate could purchase these course. Ideas were also discussed regarding the possibility of collaborating in the production of courses and negotiating for the acquisition of course material developed elsewhere."(Ref. 8.42) This initiative coupled with that of the Western Canadian Universities and encouraged further by recent statements extolling the virtues of cooperation at the June 1982 meeting of the International Council on Correspondence Education suggest that this may be an opportune time for more than lip service to be given to such developments on a Canada-wide basis.

Emerging from a different perspective, an April 1982 report from the Board of Trustees of Algoma University College to the Ontario Council of University Affairs has some profound organizational observations that seem applicable to our concern with distance education (Ref. 8.2). In commenting on what has come to be known as the Bourns Report, the Governors of Algoma University College note that:

> "we have long argued that the basic weakness of the present system of affiliation with Laurentian, especially in the period of competition for financial resources and students, is that each College is fully responsible for it own financial affairs, yet is dependent on Laurentian for approval for the programmes and courses necessary to attract and serve the students on whose attendance the college's financial stability depends."

They go on to suggest that "to eliminate this tendency, an organizational structure must be created which will permit each campus to maintain as high a level of autonomy as is possible but which will enable the system and its central administration to exercise direct operational responsibility for the activity across all campuses. Such a structure would create a truly regional university, responsive to the educational aspirations of the local population, yet capable of rooting its programmes in the environment - social, economic, and physical - of the region."

The following admonitions of Lee and Bowen, included in the Algoma Report, are worth summarizing here:

-- continuing the conscious awareness that most decisions, most of the time, are better made at campuses or on a decentralized basis;

-- equal awareness that some decisions - often the hardest ones - must be made by the central administration and the governing board;

-- the best possible information - historical, current, and projected - about programmes and needs, coupled with judicious use of such information for more informed decisions at both campus and system wide levels;

-- flexibility within the multi-campus system to employ budgetary resources effectively among campuses - and at the campus level among programmes - to ensure diversity and specialization in a period of increasing fiscal constraints;

-- regional and system-wide academic programmes which attract and engage the abilities of faculty and students beyond those arising on a single campus;

-- system-wide capacity - both technical and at the highest policy levels - for institutional self-analysis, evaluation and change;

-- on-going efforts to mobilize energies of campus administrators, faculty and students to seek solutions not only at their campuses but within the system as a whole (Eugene C. Lee and Frank M. Bowen, Managing Multi Campus Systems: Effective Administration in an Unsteady State, Carnegie Counsel Series, Jossey-Bass 1975).

5 ORGANIZATIONAL ALTERNATIVES FOR THE PROVISION OF DISTANCE EDUCATION OPPORTUNITIES THROUGH THE UNIVERSITIES OF ONTARIO

The preceding review of selected literature suggests a continuum of organizational models for the production and delivery of distance education materials and services, moving from a highly centralized and controlled single agency at one pole to a more decentralized or status quo approach at the other. The interim report presented to the June 18 meeting of the Council attempted informally or heuristically to use such a scheme for purposes of organizing the presentation. We continue to think that the notion of a continuum defined primarily in terms of centralization or control is a useful guide to a review of this section on organizational alternatives. In the order of presentation, an attempt is made to make use of this general notion of a continuum, but as will be apparent, there are definite departures from such a scheme confirming the obvious fact that we are dealing simultaneously with more than a single dimension.

5.1 Organizational Alternatives - Course and Programmme Development

5.1.1 MODEL I: The single agency with a province wide mandate to prepare distance education materials. The DIFF model described earlier and the KNOW (Knowledge Network of the West) of British Columbia, provide illustrations of this approach, but only partially so. Indeed, certain of the activities of TVOntario contain components of this model. However, in its pure form, the model would require that a single agency be given a province wide mandate and the commensurate resources to develop distance education courses for the entire university system - and presumably the entire postsecondary education system. Cooperation with educational institutions would obviously be required, but the responsibility, authority, and resources would reside in the agency producing the material. Cooperation would not be by persuasion or on a voluntary basis, but would presumably be purchased by the agency through resources made available to it from the government.

5.1.2 MODEL II. The establishment of formal working groups based on particular communications media or disciplinary competencies. In this model, working groups would be established by statute or formal agreement and include contractually binding commitments on the part of the participants to fulfill the terms of the agreement. The working groups would create materials which would then be available under specified conditions to all members of the university system. For example, several of the universities in Ontario have valuable experience in the preparation of course materials making use of television, not simply as a delivery technology, but as a component of the pedagogy. Such a working group of institutions might be formally recognized and funded by the Ministry and assigned the mandate of preparing courses making use of this media for the entire system. Similarily, small but formally established working groups of institutions might be developed according to disciplinary competencies, e.g. the several universities with a particularly successful experience in and/or resources for the development of courses in computing science might be asked to provide courses in that subject matter for the entire system. While the experience is not yet in hand to provide a basis for evaluation, the terms of reference of the Committee on Distance Education of the Western Canadian Universities provide the opportunity for the development of a model of this kind.

5.1.3 MODEL III: The decentralized approach in which existing activities are continued under the total control and authority of individual institutions and agencies. This model comes very close to describing the status quo in Ontario, although there is a commendable level of voluntary sharing of information and even some cooperation in the development of course materials. Some of this cooperation has been stimulated by the interests of TVOntario and by resources made available through that agency. A significant variant on Model III (Model III B) would involve the government providing additional monies to stimulate the development of distance education materials. At present universities electing to engage in this activity are required to do so from existing resources. Were the government to establish a programme of incentive grants, the development of university level educational materials in the distance mode might well be accelerated. Such a scheme would certainly permit the testing of the so-called free market approach to these matters, an approach advocated by several of the university representatives contacted in the course of this review.

5.1.4 MODEL IV: The establishment of a central agency of the provincial government for the acquisition of distance educational materials. Prior to the formal creation of the Open Learning Institute in B.C., the government of that province acquired a considerable set of distance education materials produced by the Open University in the U.K. The notion at that time was that the universities and colleges of the province could have access to these materials and incorporate them into their own programmes as they saw fit, both in terms of conventional campus based classroom offerings and distance education opportunities. In the model suggested here, the agency assigned the responsibility for acquiring materials might well commission the creation of such materials from provincial and extra provincial institutions and agencies as well as buying those already in existence. Presumably, the programme of acquisitions would be guided by some awareness of the needs of the people of the province for courses and programmes. The agency created to do this would clearly have components of the role of a brokerage firm or clearinghouse and a library. Although the illustration is incomplete, the Knowledge Network of the West established in B.C. contains components of this model.

5.1.5 MODEL V: The "muddling through" or mixed model. Similar to model III this approach - which scarcely deserves the label "model" - suggests that with very loose coordination if any, the involvement of the Universities of Ontario in the preparation of distance education materials be permitted to continue to develop "naturally". Thus, certain materials might be produced through the initiative and energies of TVOntario working alone or at least as the prime mover, small working groups might be established on an ad hoc basis and disappear when course materials were completed; or it is conceivable if unlikely that a total province-wide voluntary association of institutions and agencies might emerge and work constructively toward the preparation of materials which could then be made available to the entire system.

5.2 Organizational Alternatives - Programme and Services Delivery

5.2.1 MODEL I: The status quo. The adoption of this model would suggest that the system wishes to ensure some order in its distance education activities, but in a time of serious financial constraint is not prepared to reallocate or redirect resources from other current activities into an expansion in this arena. In this model there would be formal recognition of the current activities of the universities in Ontario and an agreement that each would continue within its current sphere or domain. In this model, there might be a prohibition against institutions branching out into new areas. Thus, for example, were this model to be in force at present, the initatives planned to commence in the Fall of 1982 at the University of Guelph would not be permitted.

5.2.2 MODEL II: The voluntary cooperation approach. In this model, as illustrated by several existing arrangements within the province, a group of universities or agencies get together informally and share the responsibility for delivering courses or sets of courses. To date, we know of no Ontario experience in which entire programmes leading to degrees have been cooperatively delivered. This model provides a comfortable structure in which universities can work since it demands no relinquishment of sovereignty or erosion of independence. In those strengths are its weaknesses. When difficulties of jurisdiction or authority arise, the motivation for cooperation and coordination typically disappears.

5.2.3 MODEL III: The formal working group model. In this approach, a set of universities agree to a common set of goals with regard to the delivery of educational services by the distance mode. With that agreement in place, the universities proceed to establish differential responsibilities for sub-components of the total delivery task. These agreements and responsibilities are binding on the partners to the agreement and presumably sanctions can be defined for a violation of these agreements. In this model, the working group can come into existence, complete its task and be disbanded with all partners fully aware of what is happening to them at each stage of the process. Although it involves but two institutions, the working arrangements currently in force between the Athabasca University and the Open Learning Institute of B.C.

provide a nearly valid illustration of this model.

5.2.4 MODEL IV: The informal coordinating approach. The Liaison Committee created under the auspices of the Council of Ontario Universities to assist in the review being reported here illustrates this model. In this approach all the universities agree to share information about the delivery of educational services through the distance mode and to meet, say, annually to ensure that there is some province-wide awareness of current activities. As in all voluntary groupings, this model has the disadvantage of providing very little incentive for real cooperation in the delivery of particular courses or programmes.

5.2.5 MODEL V: The single agency model. As the label suggests, in this model, an agency such as OECA would be given the complete responsibility, authority and resources to delivery all university level courses that are offered in the distance mode, including those that make primary use of print. As impractical as this model sounds at first blush, the experience of several European countries suggests that it is not without merit. Given the at best varied track record of universities in Ontario and elsewhere in working together voluntarily, it can be argued that the creation of an organization with first level competency in the use of the media may well accelerate the development of educational opportunities through distance delivery methods in ways that no single or group of universities could or would. This model would clearly require the universities to relinquish authority in areas that they have traditionally considered theirs alone.

5.3 Organization Alternatives - Distance Education Institution Model (Development Model I/Delivery Model V)

In this model, we combine the development and delivery functions and in some sense admit that their separation in the earlier sections of this chapter is artificial. This model might also be labeled the "single purpose" or "independent-institution-devoted-exclusively-to-distance education-model." Although none of them represent completely pure illustrations, within Canada, Athabasca University and the Open Learning Institute of British Columbia are the clearest examples of institutions which combine the course and programme development and programme and services delivery functions. In the United States, the University of Mid-America, comes close to being a valid illustration of this model.

However, the independence of the University of Mid-America is significantly compromised by the fact that it exists at the pleasure of a series of cooperating traditional campus-based institutions in the mid-western United States.

In this model, a totally independent infrastructure and governance apparatus is created and funded, and the necessary personnel with competencies to develop and deliver the educational services are procured. Obviously, the necessary provincial legislation permitting the awarding of degrees is also required.

6. EVALUATION OF ALTERNATIVES

6.1 Evaluation Criteria

As required in the terms of reference for this review, this section will comment on the organizational alternatives outlined in the preceding section using three sets of criteria: those emerging from our limited but we hope accurate awareness of political factors at play at present in Ontario; those emerging from attempts to describe techniques or principles of efficient learning, and those based on resource or financial considerations. Not having worked in the university system in Ontario, we will doubtless have made mistakes in our application of these criteria. We believe that our approach is valid and invite those who receive this report to make it useful by correcting the errors, but making use of the framework.

The use of criteria labelled learning effectiveness requires the following qualifying disclaimer. While one of us claims some competence as a psychologist with interest and experience investigating the processes of learning, we have not had the time or opportunity to assess each of the models outlined here in any rigorous sense according to the so-called principles of effective learning. Here again, however, we think this system or scheme is a useful tool and would urge those making decisions about future development of distance education activities in Ontario to keep such considerations at the forefront of their thinking and planning. Typically, decisions on organization are based primarily on political or economic factors. The Council of Ontario Universities could make a major contribution to the planning of educational services by keeping in mind the central concern with learning that ought to inform everything that we do in an educational context.

6.2 Evaluation of Development and Delivery Models

The application of these criteria in a preliminary way is summarized in Tables 7 and 8. In the comments which follow, we amplify and hopefully clarify briefly that summary presentation.

Although the distinction is admittedly incomplete, we have tried to separate government or ministry level political considerations from those of regions. In addition, we guessed at the likely response of TVOntario and the individual institutions comprising the university system in Ontario. We admit that there is no single view for the university system or for that matter for any of the other constituencies included under our category term 'political criteria'. Although we concede the risk, we thought it would be important to force thinking of this kind by speculating where the information was incomplete. Here again, those using the approach can correct any blatant or obvious errors.

With regard to political considerations, it is apparent from an overview of Table I that we surmise that the Ministry responsible for universities in Ontario would not likely respond positively either to the proposal for the creation of a brand new university in Ontario responsible for distance education, or to the proposal for a complete endorsement of the status quo. We sense in our review an eagerness on the part of the Ministry, to be useful in support of the important developments incorporated under the heading distance education but a commendable reluctance to actively or perhaps visibly interfere with institutional autonomy. Thus, we suspect that the provincial Ministry could be persuaded to support some version of Model II for development and Model III for delivery.

Our evaluation of regional political considerations suggests a preference for a softer form of coordination and a movement toward the decentralization or status quo pole. There are exceptions to this and regions such as those surrounding the Lakehead and the Laurentian University catchment area might be exceptions to this evaluation. In these regions, we found a willingness to actively consider structures for coordination which would require more than voluntary opting in and out of such arrangements.

TVOntario, at least through the major spokesman with whom we were in contact, strikes us as very eager to get on with an energetic push in extending educational services through distance technologies. Indeed, we see this agency as determined to see something happen in this arena, with or without the blessing of the Council of Ontario Universities. Obviously, the first choice is for collaboration and cooperation.

TABLE 7

EVALUATION OF DEVELOPMENT MODELS

Criteria	Model I	II	III A	III B	IV	V
POLITICAL						
Provincial Government	0	+	0	-	0	-
Regional Considerations	-	0	0	+	-	+
TVOntario	+	+	0	-	0	-
Individual Institutions	-	0	0	+	-	+
LEARNING EFFECTIVENESS	+	0	0(?)	0(?)	+	-
FINANCIAL/RESOURCES	-	0	+	-	0	0+

Key:
+ = positive response (favor)
0 = neutral response (indifference)
- = negative response (disfavor)

Models:
I - Single agency with Province-wide mandate
II - Formal working groups
III A - Decentralized approach (status quo)
III B - Decentralized approach (additional funding)
IV - Central agency for acquisition
V - Mixed model

TABLE 8

EVALUATION OF DELIVERY MODELS

Criteria	Model I	II	III	IV	V
POLITICAL					
Provincial Government	-	0	+	0	0
Regional Considerations	0	+	0	0	-
TVOntario	-	-	+	-	+
Individual Institutions	+	+	0	+	-
LEARNING EFFECTIVENESS	0	0	+	0	0
FINANCIAL/RESOURCES	0	0	-	0	-

Key:
+ = positive response (favor)
0 = neutral response (indifference)
- = negative response (disfavor)

Models:
I - *Status quo*
II - Voluntary cooperation
III - Formal working group
IV - Informal Coordination
V - Single agency model

The application of criteria loosely defined as related to learning effectiveness remains incomplete. We speculate that models approaching the single purpose independent institutions will permit greater control of quality and the kind of research and experimentation that will produce more effective instructional materials and delivery approaches. However, we have had to indicate by the inclusion of question marks our absence of data to support that speculation.

With regard to financial resources, it is clear that there is a significant opposition between those models that we think are going to get on with the task most effectively in terms of learning effectiveness criteria, and those which are likely to cost less. Thus, the review would seem to confirm a whole series of worn-out adages and cliches, e.g. there is no free lunch, you only get what you pay for, quality doesn't come cheap, you don't get something for nothing, etc.

With regard to the evaluation of delivery models, it is our assessment that those models that emphasize a clear definition of task with associated statements of responsibility and the resources to carry them out have the best opportunity of meeting the primary criteria of learning effectiveness. In the case of delivery models, we are also convinced that a variant of model III involving working groups with these attributes may well meet political criteria as seen from the perspective of the Ministry and regions of the province. We also see TVOntario as prepared to work cooperatively with some version of model III.

As in the case of our evaluation of production models, we see the preferred delivery model from the perspective of learning effectiveness criteria as costing more. We may be too pessimistic in this instance. Continued development and expansion of distance education delivery capabilities on an *ad hoc*, uncoordinated basis may cost less in absolute terms. But in terms of cost effectiveness, additional outlays are likely to be fully justified by the quality of service made possible and by the capability to provide services that a single institution might not have the resources to support, particularly where mass communication technologies are involved.

6.3 Evaluation Of The Distance Education Institution Model

The reviewers remain convinced that the independent institution with the capacity to develop and deliver educational services through the distance mode has the highest probability of meeting criteria of effective learning. In what would probably best be described as an "idealized" form, this model would be staffed by people with formal training in the processes of instructional design and in the psychology of effective learning. Such staff would also include people with research and experimental skills enabling them to design new and improved educational materials and circumstances. Thus, over time, through a gradual process of improvement in quality, a completely effective and efficient learning context could in theory be designed. In practice, as is well recognized, the availability of such people and indeed the capacity of any of the traditional institutions to create them is far from complete, and in the eyes of many highly suspect. However, we remain convinced that with all of the challenges that can be thrown at those with sometimes uncritical and excessive enthusiasm for the glories of instructional design, the institution possessing people with such skills, or prepared to work toward the acquisition of them is likely to produce materials of superior quality.

On the delivery side, we are also convinced that such a single-purpose institution with appropriate resources, again primarily in terms of people, can deliver services that improve the probability of effective learning.

It is in the arena of political and economic criteria that the single-purpose distance education institution is most vulnerable. As we have noted, our reading of the political situation in the province, from the perspective of individual universities, the Ministry, TVOntario, or the regions of the province, does not lead us to believe that there would be support for the creation of a new university or institute of this kind.

We concede that this statement is made with less confidence with regard to the Ministry and TVOntario, although one would assume that support for a new institution on the part of TVOntario would be considerably more probable, were TVOntario itself to be that institution.

With regard to economic criteria for assessment, there is simply no question but that the creation of such an institution would cost, at a minimum, 35 per cent more than to provide similar distance educational services through the capacities now available in the existing universities

Thus, we are convinced that were resources available, and were the overriding criteria to be the expansion of post-secondary educational opportunities of quality, a new single-purpose distance education institution should be created. However, since we recognize that this is fantasy, we do not arrive at such a recommendation, and instead outline the proposition contained in the next section.

7. CONCLUSIONS AND RECOMMENDATIONS

In what clearly has components of the self-fulfilling prophesy, we conclude that there is a demand for further educational services in the Province of Ontario offered by the university community in the distance mode. In other words, we are convinced, as was Waniewicz in 1976, that there are people who will benefit from university credit courses who are not now able to obtain them because of barriers of time, personal circumstances or physical distance. It will surprise no one that we recommend that the universities of Ontario, through the Council that coordinates their affairs, respond to that demand.

On the basis of the preceding review of existing and planned activities of Ontario universities in distance education, we have reached a positive conclusion with regard to the second of our terms of reference, that we assess the feasibility of a cooperative approach to university distance education in Ontario. We now propose to satisfy the third, which requires that we recommend a "desirable organizational approach to expanding cooperation among the universities and between the universities and TVOntario." In doing so, we will make use of the organization arrangement described in the previous section as the "working group with clout or teeth." We will suggest, through illustrations of how such working groups might come into existence, that the universities in Ontario are indeed in a position to develop "an integrated degree programme for adult part-time learners", thus fulfilling another of our terms of reference. We do not comment directly on the "desirability of developing in Ontario additional educational opportunities specifically designed for adult part-time learners" because it is our conviction that the expanded opportunities that we will propose in our illustrations apply to all learners, whether part-time or full-time, and whether chronologically adult or no.

7.1 System-wide Liaison Committee

The establishment of a system-wide coordinating committee is a key element of the organizational strategy that we suggest be employed. Such a committee will need to pursue a number of objectives:

1. to encourage and facilitate the exchange of

information about institutional activities and developments in distance education;

2 to provide opportunity for coordination of programme planning activities and resultant plans;

3. to initiate inter-institutional credit transfer policies and procedures;

4. to develop mechanisms for cooperation among universities and between universities and and other organizations in development of course materials and delivery of services;

5. to facilitate the establishment of cooperative arrangements for the marketing of distance education materials;

6. to facilitate investigation of potential sources of funding for cooperative activities and to coordinate funding;

7. to ensure the establishment and effective functioning of appropriate working groups;

We suggest that the ad hoc liaison committee established to serve the purposes of this review continue as a standing committee of the Council of Ontario Universities and that the committee be provided with terms of reference and authorities appropriate to the objectives set out above. This organizational approach is similar to that taken by the Office of Library Coordination of the Council. Library Systems being an area of common concern, the universities of Ontario were brought together and specific and clear terms of reference were established. Each university attended to the commitments implied by participation in the project, carried out the work involved, and when the mechanism was no longer required it was allowed to proceed to a decent and dignified death. We believe that, with the modifications necessary to fit the task at hand, the Library Cooperative System Organization approach provides a model for the organization of cooperative efforts among the universities in the distance education area.

We offer the following as a first draft of a statement of terms of reference for what we will now call the Council of Ontario Universities Committee on Distanc

Education, noting that it draws from, but expands upon the terms of reference of the Committee on Distance Education of the Western Canadian universities:

> The role of the Committee on Distance Education shall be to provide a forum for the consideration of common problems facing institutions engaged in the development of distance education materials and/or the delivery of services. The committee will facilitate joint efforts on the part of universities in these areas.
>
> Primary functions shall include:
>
> 1. Encouraging member institutions to cooperate in:
>   a) sharing information about programme offerings, programme plans, and delivery systems;
>   b) the sale and exchange of course materials;
>   c) new programme and course development planning;
>   d) facilitating transfer of credit for distance education work among institutions;
>   e) facilitating joint utilization of course materials and the exchange of staff among institutions;
>   f) developing an integrated degree program offered by distance education;
>
> 2. Maintaining continuing liaison with TVOntario on behalf of the universities of Ontario;
>
> 3. Reviewing and approving proposals for the establishment of Working Groups for specific purposes.
>
> The Committee shall operate within an annual budget established by the Council. This budget may include funds made available for specific cooperative projects in which case the Committee shall provide budgets to working groups. The committee shall prepare and submit an annual report to the Council.

Obviously, these terms of reference will require modification to fit the particular circumstances of initial establishment and, over time, to incorporate the benefits of Committee experience.

Although our terms of reference did not include a review of distance education activities in the community colleges of Ontario, we have become aware of certain important developments in the college sector. Most notable are the developments at Seneca and Humber Colleges. It will be important to work cooperatively with the community colleges that become active in this field and we suggest that the COU Committee include a standing representative from the college system or that college representatives be invited to attend meetings, depending upon agenda.

We also suggest that serious consideration be given to including a representative of each of the Ministry of Colleges and Universities, the Ontario Educational Communications Authority and the Ontario Council of University Affairs. These recommendations emerge from our recognition of the need for a province-wide and comprehensive vehicle for exchange of information and initiation of action among all those with a current involvement or a potential contribution to make.

It is critical that it be clearly established at the policy level that further developments in distance education, whether through the application of newer communications technologies, the creative reordering and packaging of disciplines, or through groupings of cooperating partners based on geographic or other factors, be initiated through the COU Committee on Distance Education. The current fragmented approach to developments, whether initiated by individual universities, TVOntario, or others in the system, is not effective economically or in the expansion of services.

7.2 General Characteristics of Working Groups

The general characteristics of the working group model that we advocate are presented in Sections 5.1.2 and 5.2.3. It will be useful, however, to repeat them here in the context of our organization recommendations:

1) Working groups will be organized under the aegis of the COU Committee on Distance Education;

2) Working groups will be established by formal agreement and will involve contractually binding commitments on the part of each participant;

3) Sanctions for the violation of agreements will be defined and enforced;

4) Provisions will be made for regular reporting of working group activities through the Committee on Distance Education;

5) Agreements will include provision for withdrawal from a working group and for a working group's dissolution when its purposes have been fulfilled or when it is apparent that it is no longer useful.

7.3 Organizing Working Groups

There are a number of classification schemes by which to organize working groups. For the purposes of illustration, we have selected the following three factors:

Geographic factors: Several institutions in the same geographic region, or serving overlapping regions, may want to organize working groups on this basis.

Subject Matter or Disciplinary Competencies and/or Common Interests: Where two or more universities have particular strengths in similar areas of study, or where complementarities exist, this may be used as a basis for cooperation.

Technological Factors: Several universities with experience in the use of a particular technology (e.g. television, teleconferencing) may seek cooperation in the further development of the medium and/or institutions may jointly acquire the hardware necessary to exploit a particular technology.

Having underscored throughout this report the survey nature of this review, we make no claim to having a sufficiently thorough understanding of the current activities at each institution or potential for growth and development to make specific recommendations for working groups. This having been said, we offer the following illustrations of working groups based on what we do know about the interests and competencies of some of the universities currently active in distance education.

7.3.1 WORKING GROUP for the Development of a Television-Based Course focusing on Energy and the Environment

Nine institutions will recognise that this is not a hypothetical illustration.
The University of Western Ontario initially developed this course using the traditional format, then elected to involve other universities and TVOntario in the further development of the television components of the course. A meeting of representatives of the Universities of Western Ontario, Carleton, Geulph, Laurentian, McMaster, Ottawa, Trent, Wilfrid Laurier and the Ryerson Polytechnical Institute, convened by TVOntario, resulted in the establishment of an informal consortium of institutions, working with TVOntario in the production of a series of TV programmes to be completed in 1983.

The information available does not permit an unqualified categorization of this illustration as a working group based on technological/media interests or on subject matter competencies. Nonetheless it is a good illustration of what can be and is being done. It stands, in our judgement, as evidence that the working group model has a practical feasibility.

7.3.2 WORKING GROUP - The Thunder Bay/Sudbury Connection

Although it has not used distance education means, Lakehead University has a well established and commendable track record in extending its services into remote and thinly populated regions of the province. Laurentian University has an active programme in distance education and has sought energetically to extend educational opportunity in its region.

We suggest that a working group might be established involving Lakehead and Laurentian and at least one other institution, for the purpose of extending university-level services into the vast northern regions of the province. Such a working group illustrates the geographic factor basis of establishment.

We should note that this particular working group might seek to exploit a particular communications technology to overcome problems in maintaining communication with people in remote areas. (While we would need to confirm that there are citizens of Canada not able to be reached by the postal service, the service available may be sporadic and minimally effective.) Newer communication technologies are capable of reaching the most remote and isolated. Satellite transmission, while hardly perfected with respect to educational usage, is now at a level of software maturity and a level of cost effectiveness that may permit consideration of use by a working group of institutions, if not by a single university.

7.3.3 WORKING GROUP - Common Technologies

At several points during this review, we were reminded of the special experience and competence of certain institutions with respect to particular media. The extraordinary extent of the Waterloo experience with use of audio tape is an obvious case in point. Wilfrid Laurier University enjoys an extensive experience in the use of television both as an instructional tool and as a delivery medium.

Natural and effective working groups are likely to emerge around the use of one or more of the newer communication technologies. In some cases the basis for cooperation may be found in the need to share capital and operating costs. In other cases expertise may be the factor. Given the relative scarcity of data regarding the learning effectiveness of various technologies, it seems to us much more than hypothetical to suggest that a working group might be formed with a primary mission of testing a variety of media in the educational context and assessing their effectiveness in promoting learning.

Working groups established on the basis of technological factors will provide opportunities for OECA/TVO to become involved in ventures as a full and participating partner under terms appropriate to all the participants.

7.3.4 WORKING GROUP - Common/Complementary Subject Matter

Although it is conceivable that two or more institutions having strength in a particular discipline may derive sufficient benefit from a cooperative approach to course development and/or services delivery to make a joint venture attractive, it is more likely that a working group might be formed where institutions have strengths that are complementary and where joint effort results in significant cost savings and/or productivity increases.

Recognizing the risk in labelling any university a leader in a particular discipline or subject matter area, we suggest as an illustration of the subject matter based working group, one based on the relative strength of Computing Science programming at Waterloo University and the need for offerings in this area expressed by the University of Guelph.

7.3.5 WORKING GROUPS - Special Programme, Task and Interest Areas

Our review has not addressed the potential or need for service to the francophone community in Ontario through distance education methods. While recognizing this deficiency, we suggest that there is no basis in principle for the mechanisms we propose not being applicable across a wide range of special needs areas. Moreover, it would seem reasonable for a working of universities with French language programming to be established in a fashion similar to other working groups.

7.4 Regional and National Coordination

In a separate communication to the Council of Ontario Universities, we have stated our qualified support for endorsement of certain national initiatives regarding coordination in distance education. This position is summarized in Reference 8.45.

In our judgement, should the COU Committee on Distance Education come into existence, it could provide a mechanism for participation in national coordination efforts. This would be nicely congruent with developments in the Atlantic provinces and similar activities in the West. The Atlantic initiatives are set out in a paper prepared in the Summer of 1981 entitled Universities and the Public Interest: The Challenge of Communications, Technology and Education in Atlantic Canada. It is proposed that the Association of

Atlantic Universities:

> "take an initiative to establish an Atlantic Communications, Technology and Education Forum for a term of three to five years. The forum is to be a region-wide, cooperative venture the mandate of which includes the following:
>
> 1) to develop and maintain a complete inventory of resources and projects in communications, technology and education in the region;
>
> 2) to gather and disseminate "consumer report" type information and reports on communication technologies (this might involve establishing and maintaining a "Communication Technology Centre" which would display, demonstrate, and test current equipment and systems);
>
> 3) to survey and assess current research and experimentation in the field elsewhere in Canada and beyond, especially in the public policy area;
>
> 4) to identify gaps in existing research and development and encourage work in those areas;
>
> 5) to develop mechanisms (sub-committees, task forces, etc.) to focus on areas of particular significance (e.g., distance education, libraries and research resources, information needs for particular public groups, etc.);
>
> 6) to undertake a vigorous programme of public and special constituency education designed to improve discussion, debate and decision-making in this field (i.e., conferences, seminars, workshops, etc.);
>
> 7) to work closely with other bodies or agencies with similar or related interests;
>
> 8) to make recommendations to appropriate agencies, governmental and otherwise."

In a previous section we drew attention to the terms of reference for the Committee of Distance Education of the Western Canadian Universities. Were the Ontario coordinating committee to become a reality. these three regional groupings would be in a position to provide substantial beginnings to national coordination. The Association of Universities and Colleges of Canada initiative suggests the modest first step of a national gathering to consider and debate such propositions. It seems to us not only riskless, but essential for the Council of Ontario Universities to support and participate in this endeavour. Without such support, no claim for national representation is possible.

As a final comment with respect to national coordination, we suggest that the evolution of any country-wide mechanism ought to follow the general plan and process that we advocate for Ontario. Universities should develop mechanisms for coordination based on common educational objectives as the essential first step, with larger working groups subsequently organized on regional and ultimately national bases, but remaining focussed on their educational missions. Initiatives could then be taken to bring other institutions and agencies into the coordinating framework. We consider this to be more than a petty attempt to establish and narrowly define jurisdictional boundaries or to preserve the purity and sanctity of the "ivory tower". The Ontario universities' experience with TVOntario demonstrates the importance of retaining the responsibility and authority for educational programming decisions within the universities. This principle is equally applicable at the national level. In our view, it is essential that the machinery for such coordination be in place before invitations are issued to, for example, ACCESS Alberta, the Knowledge Network of the West (British Columbia), or OECA/TVOntario to participate in inter-provincial or national initiatives in distance education.

7.5 A Final Note

In this section and elsewhere we have attempted to offer recommendations that will benefit the institutions involved with distance education and students, the ultimate beneficiaries. Our concern is not simply with extending educational opportunity or expanding programmes. We hope that what is now offered can be made more effective. It has been suggested that even if the element of new demand is not as sizeable as estimated, the need to enrich and improve opportunities for the distance learner and reduce some of the extension activity that is no longer cost effective warrants a coordinated approach to distance education. The straightforward purpose of improved coordination is to eliminate waste, fill gaps and enlarge opportunities for distance learners.

8. REFERENCES

8.1 Alberta Advanced Education and Manpower. The Context for Continuing Development of Post-Secondary Education Services. Edmonton: AAEM, March 1982.

8.2 Algoma University College Board of Trustees. Brief from the Board of Trustees of Algoma University College to the Ontario Council of University Affairs. Sault Ste. Marie, Ontario: Algoma University College, 1982.

8.3 Anisef, Paul. The Pursuit of Equality: Evaluating and Monitoring Accessibility to Post-Secondary Education in Ontario. Toronto: Ontario University of Education/Ministry of Colleges and Universities, 1982.

8.4 Avon, P. and M. Freedman. Report to the Committee on Post-Secondary Education Projects. Toronto: Educational Services, 1981.

8.5 Blenkinsop, P. Report to Senate Committee on Continuing Education on the Media Program. Sudbury, Ontario: Laurentian University, 1982.

8.6 Clarke, G. Letter to W.A.S. Smith. February 8, 1982.

8.7 Committee of Presidents of Universities of Ontario. Subcommittee on Research and Planning. Towards 2000: The Future of Post-secondary Education in Ontario. Toronto: McClelland and Stewart, 1971. Presented as a brief to the Commission on Post-Secondary Education in Ontario.

8.8 Committee on Communications, Technology and Education, Atlantic Provinces Association of Continuing University Education. Universities and the Public Interest: The Challenge of Communications, Technology and Education in Atlantic Canda. Atlantic Provinces Association of Continuing University Education, October 1981.

8.9 Council of Ontario Universities. "A Response on Behalf of the Council of Ontario Universities to Continuing Education: The Third System." Toronto: Council of Ontario Universities, 1981.

8.10 Council of Ontario Universities. Universities and the Future of Ontario: A Foundation on which to Build.

Toronto: Council of Ontario Universities, 1981.

8.11 Council of Ontario Universities. *An Uncertain Future: Review 1975-76 to 1977-78*. Toronto: Ryerson Polytechnical Institute, 1982.

8.12 D'Antoni, S.G. *An Information System for Distance Education Using Videotex Technology*. Diss. University of Toronto, 1982.

8.13 Daniel, J.S. *et al*, eds. *Learning at a Distance: a World Perspective*. Edmonton: Athabasca University and the International Council for Correspondence Education, 1982.

8.14 George, D.A. and J.R. Landsburg. "Prime-Time for the Intellectual: The Use of Instructional Television at Carleton University." A paper presented at the 9th Annual Conference of the Association for Media and Technology in Education in Canada. Ottawa, June 17-20, 1979.

8.15 Guinsburg, T.N. "From Quagmire to the Promised Land: the Unfinished Agenda of University Continuing Education in Canada." *Canadian Journal of University Continuing Education*, v.8, no.1, 1981, p. 16-25.

8.16 Guinsburg, R.N. Letter to B.L. Snowden. May 27, 1982.

8.17 Fisher, H.K. (Chairman). *Report of the Committee on the Future Role of Universities in Ontario*. Toronto: Ministry of Colleges and Universities, 1981.

8.18 Humphries, E. and J. Porter. *Part-time Studies and University Accessibility*. Ottawa: Carleton University, 1978.

8.19 Jago, C.J. *et. al.*. *Report of the New Initiatives in Continuing Education Sub-Committee of the Board/Senate Committee on Long-Range Planning*. Hamilton, Ontario: McMaster University, 1980.

8.20 Keegan, D. "On Defining Distance Education." *Distance Education*, v.1, no.1, p. 13-26.

8.21 Laurentian University. *Spring and Summer 1982: Part-Time Studies*. Sudbury, Ontario: Laurentian University, 1982.

8.22 Levy-Coughlin Partnership, Inc. *Program Availability and Student Needs in Part-Time Studies at Ontario Universities.* Toronto: Ontario Ministry of Colleges and Universities, 1981.

8.23 Monahan, E.J. Letter to B.A. Wilson. January 20, 1982.

8.24 Monahan, E.J. Letter to Dr. J. Parr. February 15, 1982.

8.25 Moore, G.A.B. and M.W. Waldron. *Helping Adults Learn.* Guelph, Ontario: University of Guelph, 1981.

8.26 Morrison, T.R. *Proposal to Establish a Western Canadian Committee on University Distance Education.* University of Manitoba, 1982.

8.27 Muluihill, I. *The Use of Instructional Television at Carleton University: A Preliminary Assessment.* Ottawa: Carleton University, 1981.

8.28 Murphy, L.R. "Adults in College: Promise or Reality? An Essay Review." *The Review of Higher Education*, v.5, no.3, 1982, p. 169-175.

8.29 Ontario Council on University Affairs. *A Financial Analysis of the Ontario University System 1981.* Toronto: Ontario Council on University Affairs, 1981.

8.30 Ontario Ministry of Colleges and Universities. *The Report of the Committee on the Future Role of Universities in Ontario.* Toronto: Ontario Ministry of Colleges and Universities, 1981.

8.31 Ontario Council on University Affairs. *Seventh Annual Report 1980-81.* Toronto: Ontario Council on University Affairs, 1981.

8.32 Ontario Council on University Affairs. *System Rationalization: A Responsibility and An Opportunity.* Toronto: Ontario Council on University Affairs, 1980.

8.33 Ontario Ministry of Education and Ministry of Colleges and Universities. *Continuing Education: The Third System.* Toronto: Ontario Ministry of Education and

Ministry of Colleges and Universities, 1981.

8.34 Open College/Ryerson. Information Brochures for the 1982-83 Open College Program. Toronto: CJRT-FM Inc., 1982.

8.35 Open Learning Institute. *Annual Report 1981*. Richmond: Open Learning Institute, 1982.

8.36 Open Learning Institute. *Calendar 1982/83*. Richmond: Open Learning Institute, 1982.

8.37 Open Learning Institute. *Five-Year Educational Plan 1981-1986*. Report submitted to British Columbia Minister of Education. Richmond, December 1981.

8.38 Open Learning Institute. *Survey of Distance Education in Western Universities*. Richmond: Open Learning Institute, April 1982.

8.39 Parer, M.S. "The International Documentation of Distance Education." Paper presented at the Twelfth Conference of the International Council for Correspondence Education, Vancouver, June 8-16, 1982.

8.40 Parr, J. Letter to Dr. E.J. Monahan. February 23, 1982.

8.41 Porter, J. (Chairman). *Toward 2000: The Future of Post-Secondary Education in Ontario*. Toronto: McClelland and Stewart Ltd., 1971.

8.42 Rogers, K.V. "*Identifying an Effective and Efficient Distance Education System*." *Canadian Journal of University Continuing Education*, v.8, no.2, 1982, p. 37-42.

8.43 Rosenweig, D. *Distance Learning Programs at Ontario Universities: A Preliminary Report*. No. 81-4. Toronto: TVOntario, 1981.

8.44 Sigler, E. *Preliminary Report on Instructional Television Project*. Ottawa: Carleton University, November 3, 1978.

8.45 Smith, W.A.S. Letter to G. Clarke re: Regional and

National Coordination. September 14, 1982.

8.46 Smith, W.A.S. and B.L. Snowden. Progress Report on Review of Distance Education Involvements in Ontario Universities. Calgary, June 1982.

8.47 Snowden, B.L. and J.S. Daniel. "The Economics and Management of Small Post-Secondary Distance Education Systems." Distance Education, v.1, no.1, p. 68-91.

8.48 Snowden, B.L. Consultants' Information Request. Memo to Liaison Representatives for Distance Education. Edmonton, May 10, 1982.

8.49 Tremlett, L.R. Distance Learning - A Survey of Modality, Method and Management in the Non-Traditional Approach to Continuing Education. Diss. Abstract. Canadian School of Management, 1981.

8.50 Tripartite Committee on Interprovincial Comparisons. Interprovincial Comparisons of University Funding. Toronto: Tripartite Committee on Interprovincial Funding, 1981.

8.51 Trotter, Bernard. Television and Technology in University Teaching. Toronto: Committee on University Affairs and the Committee of Presidents of Universities of Ontario, 1970.

8.52 "The University Squeeze". Globe and Mail, April 20, 1982.

8.53 Walker, D.M. "Distance Education in Ontario." Educational Broadcasting International, v. 12, no.2, June 1979, p. 91-95.

8.54 Waniewicz, I. Demand for Part-Time Learning in Ontario. Toronto: Ontario Institute for Studies in Education, 1976.

8.55 Waniewicz, I. Letter to Dr. T.N. Guinsburg. March 11, 1982.

8.56 Waniewicz, I. "The TVOntario Academy." In Learning at a Distance, edited by J.S. Daniel et al. Edmonton: Athabasca University and ICCE, 1982.

8.57 Waniewicz, I. Toward an Interuniversity Service to Provide Media Supported Distance Education in Ontario: A Progress Report on a Preliminary Inquiry. Toronto:

TVOntario, June 1982.

8.58 Waniewicz, I. *An Ontario Inter-University Service to Provide Distance Education Credit Courses: A Feasibility Study*. TVOntario, n.d.

8.59 Wasylycia-Core, M.A. *Some Preliminary Data on Correspondence Students at the University of Waterloo*. Waterloo, Ontario: University of Waterloo, 1982.

8.60 Watts, R.L. *Thrust Funding for National Priorities: A Discussion Paper for the A.U.C.C.* Kingston: Queen's University at Kingston, n.d.

9. SELECTED BIBLIOGRAPHY

The following bibliography is the result of manual literature searches of the Ontario Institute for Studies in Education and the Athabasca University library collections and of an automated search of the ERIC data bases. The definition of distance education as used by this study, that is, the separation of the teacher and learner and the introduction of some form of technology between them, formed the search parameters, further restricted by including materials related only to university level courses and programs.

The documents listed have been included on the basis of library classification and/or ERIC abstracts. For convenience, ERIC document numbers have been included at the end of citations where available.

GENERAL

Armstrong, J.D. and R.E. Store, eds. *Evaluation in Distance Teaching*. Aitkenvale, Qld.: Townsville College of Advanced Education, 1980. Proceedings of a workshop held at Townsville College of Advanced Education in co-operation with the Australian and South Pacific External Studies Association, 11-14 May, 1980.

The BBC and the Open University: an Introduction. London, Eng.: British Broadcasting Corporation, 1974.

Baath, John A. *Correspondence Education in the Light of a Number of Contemporary Teaching Models*. Malmo, Sweden: LiberHermods, 1979.

Brook, Chris. "Immediacy of Course Materials." *Teaching at a Distance*, no. 14, Spr. 1979, p. 55-58.

Carlisle, Robert D.B. *The University of Mid-America: a Brave Experiment in Open Learning*. Lincoln, Nebr.: University of Mid-America, 1977. Thesis (M.A.) -- Montclair State College, 1976.

Cros, Louis. *Correspondence Tuition in France (in connection with other media) and the Development of Permanent Education: Report*. Strasbourg: Council for Cultural Co-operation, Committee for Out-of-School Education, 1968.

Dahllof, Urban and Birgitta Willen. *Evaluation of Distance Education*. Stockholm: Office of the Chancellor of the Swedish Universities, 1975. (ED115309)

Daniel, John S., Martha A. Stroud, and John R. Thompson, eds. *Learning at a Distance: a World Perspective*. Edmonton: Athabasca University and the International Council for Correspondence Education, 1982.

Dennis, Lawrence E. *The Other End of Sesame Street*. Address presented at the 26th National Conference on Higher Education, Chicago, Illinois, March 15, 1971. (ED050672)

Dodd, John. *The Credibility of Distance Education*. Milton Keynes: Open University, Distance Education Research Group, 1981.

Downey (L.W.) Research Associates. *The Athabasca University Pilot Project: Report of an Assessment*. Edmonton: L.W. Downey Research Associates, 1975.

Ferguson, John. *The Open University from Within*. New York: New York University Press, 1976.

Friedman, H. Zui. *The Admission System in Distance Teaching Institutions*. Milton Keynes: Open University, Distance Education Research Group, 1981.

Glatter, Ron, and others. *Study by Correspondence: an Enquiry into Correspondence Study for Examinations for Degrees and Other Advanced Qualifications*. Harlow: Longman, 1971.

Gooler, Dennis D. *Criteria for Evaluating the Success of the University of Mid-Ameica*. Lincoln, Nebr.: University of Mid-America, Office of Research and Evaluation, 1975.

Gross, Ronald. *Future Directions for Open Learning: A Report Based on an Invitational Conference on Open Learning Programs*. Lincoln, Nebr.: University of Mid-America, 1979. Based on the Conference on Future Directions for Open Learning (March 8-9, 1979). (ED185892)

Gross, Ronald. *Higher/Wider/Education; a Report on Open Learning*. New York: Ford Foundation, 1976. (ED127933)

Gross, Ronald. "The Other Open University, Part 1." *Planning for Higher Education*, v. 7, no. 1, Aug. 1978, p. 9-19.

Gross, Ronald. "The Other Open University, Part 2." *Planning for Higher Education*, v. 7, no. 1, Aug. 1978, p. 25-36.

Harris, W.J.A. and J.D.S. Williams. *A Handbook on Distance Education*. University of Manchester, Dept. of Adult and Higher Education, 1977.

Hartnett, Rodney T., and others. *The British Open University in the United States: Adaptation and Use at Three Universities*. Princeton, N.J.: Educational Testing Service, 1974. (ED093379)

Hawkridge, David G. *The Open University's Role in a Democracy*. 1973. Paper presented at the Leidse Onderwijsintellingen Jubilee Congress (The Hague, Netherlands, October 1973). (ED083830)

Hawkridge, David. "The University of Mid-America: An Open University Analogue?" *Teaching at a Distance*, no. 13, Win. 1978, p. 37-44.

Hershfield, Allan. "The National University Consortium -- One Year Later." *Change*, v. 13, no. 8, Nov/Dec 1981, p. 43-45.

Himmelweit, Hilde T. "Britain's Open University: Theory, Practice and Challenge." *Educational Broadcasting Review*, v. 7, no. 2, Apr. 1973, p. 93-98.

Holmberg, Borje. *Distance Education: a Short Handbook*. 2nd rev. ed. Malmo: LiberHermods, 1982.

Holmberg, Borje. *Distance Education: a Survey and Bibliography*. London: Kogan Page; New York: Nichols Pub. Co., 1977.

Holmberg, Borje. "Distance Education: Research and Development." *ICCE Newsletter*, v. 5, no. 203, 1975, p. 5-20.

Holmberg, Borje. *Status and Trends of Distance Education*. London: Kogan Page; New York: Nichols Pub. Co., 1981.

Hurt, R. Douglas. "The University of Mid-America: An Open University Approach to Higher Education." Peabody Journal of Education, v. 54, no. 2, Jan. 1977, p. 120-122.

Kaye, Tony and Greville Rumble, eds. Distance Teaching for Higher and Adult Education. London: Croom Helm in association with the Open University Press, 1981.

Kitzes, Esther and Helen Knox. Britain's Open University: A Report to the Task Force on External Studies of the University of Pittsburgh. 1972. (ED066920)

Lefranc, Robert. The Combined Use of Radio and Television and Correspondence Courses in Higher Education. Strasbourg, Fr.: Council for Cultural Cooperation, 1973. (ED093247)

Lent, Richard. Planning for the External Evaluation of the University of Mid-America. Lincoln, Nebr.: University of Mid-America, Office of Research and Evaluation, 1974.

Lewis, Roger. Counselling in Open Learning: a Case Study. Cambridge, Eng.: National Extension College, 1980.

MacKenzie, Ossian and Edward L. Christensen, eds. The Changing World of Correspondence Study: International Readings. Pennsylvania State University Press, 1971.

Marienau, Catherine. University Without Walls Handbook. Minneapolis, Minn.: University Without Walls, 1975. (ED146834)

McBride, Jack G. The Market Need for Off-Campus Cable-Based Higher Education. 1974. Paper presented at the Conference on Cable Television and the University (Dallas, Texas, January 29-31, 1974). (ED093386)

McBride, Jack G. Post Secondary Education Through Telecommunications: Final Report of Twelve CY 1974 Work Assignments to the National Institute of Education. Lincoln, Nebr.: Nebraska University, 1975. (ED172722)

McBride, Jack G. The University of Mid-America: a Regional Open Learning Model. Paper presented at the Latin American and Caribbean Meeting on New Forms of Post-secondary Education, Caracas, Venezuela, September 23, 1976.

Morgan, Colin and Ron Glatter. *Universal Access to Post-Secondary Education: Some Policy and Administrative Observations from the British Open University Experience*. 1980. Based on a paper presented the International Intervisitation Program in Educational Administration (4th, Montreal and Vancouver, Canada, May 1980). (ED194976)

Neil, Michael W. *Education of Adults at a Distance*. London, Eng.: Kogan Page, in association with the Open University Press, 1981. Based on the Conference on the Education of Adults at a Distance organized by the Open University, England, in November, 1979.

Open University. *An Introduction to the Open University*. Milton Keynes: Open University, 1977. (ED159950)

Open University. *The Open University of the United Kingdom: a Short Course*. Milton Keynes: Open University Press, 1977.

Perry, Sir Walter. *Open University: a Personal Account*. With a foreword by Sir Harold Wilson. Milton Keynes: Open University Press, 1976.

Perry, Sir Walter. *The Open University: History and Evaluation of Dynamic Innovation in Higher Education*. Forewords by Harold Wilson, Cyril O. Houle. 1st ed. San Francisco: Jossey-Bass Publishers, 1977. First published in Great Britain in 1976 as Open University: a personal account.

Perry, Sir Walter. *Teaching and Learning at a Distance: the Experience of Britain's Open University*. Vancouver: Centre for Continuing Education, University of British Columbia, 1978. (ED162171)

Pike, Robert MacIntosh, and others. *Innovation in Access to Higher Education: Ontario, Canada, England, Wales and Sweden*. New York: Interbook Incorporated, 1978.

Saint Mary's University, Halifax, N.S. *Feasibility of Modifying the Open University Concept and Techniques for Utilization in Continuing Education in the Atlantic Region of Canada: a Report*. Halifax, 1974.

Simon Fraser University. Planning Committee on Interior Programming. *Report*. Burnaby, B.C.: Simon Fraser University, 1977.

Strauss, Marvin. *University Without Walls External Degree Program: Final Report*. Cincinnati: Cincinnati University, 1979. (ED187197)

Sweden. Utredningen angaende den fortsatta verksamheten med radio och television inom utbildningsva -- sendet. *Distance Education Systems in a Number of Countries: Excerpt from the TRU Commission Report, Distance education: an Outline of the Present Situation and Some Organizational Alternatives for Post-Secondary Education (SOU 1975:72), Stockholm, August 1975*. Stockholm: LiberForlag/Almanna forlager, 1976.

Taylor, John A. *The Open University Is for You*. 1979. (ED177924)

Terentiuk, F. *A Report to the Human Resources Research Council on the Open University*. Alberta: Human Resources Research Council of Alberta, 1970.

Tunstall, Jeremy, ed. *The Open University Opens*. London: Routledge & Kegan Paul, 1974. (ED114105)

Vanderheyden, Kees and Louis Brunel. *University at Home*. Montreal: Harvest House, 1977.

Wedell, Eberhart George. *The Place of Education by Correspondence in Permanent Education: a Study of Correspondence Education in the Member States of the Council of Europe*. Strasbourg: Council of Europe, 1970.

BIBLIOGRAPHIES

Atkins, John Leslie. *Open University: a Bibliography*. Bayley Lane, Coventry: Cadig Liaison Centre, Reference Library, 1970.

Brown, Duncan H. *Educational Radio: A Select Annotated Bibliography*. Milton Keynes: Open University, Institute of Educational Technology, 1978. (ED192742)

Distance Education: Selected Titles. 2nd rev. ed. The Hague: Bernard van Leer Foundation, 1980.

Fletcher, Marjorie Amos. *The Open University, the External Degree and Non-traditional Study: an Annotated Bibliography*. Bryn Mawr, Penn.: The American College of Life underwriters, 1972.

Hawkridge, David G. *The Open University: a Select Bibliography*. Milton Keynes: Open University Press, 1975. (ED114040)

Holmberg, Borje, ed. *Studies in Education by Correspondence: A bibliography*. Publ. by Hermods on behalf of the Educational committee of CEC (the European Council for Education by Correspondence). Malmo, Hermods, 1968.

Kirkwood, Adrian. *A Bibliography of Published and Unpublished Work by Members of the Institute*. 2nd ed. Milton Keynes: Open University, Institute of Educational Technology, 1976.

COURSE DEVELOPMENT

Barnet College of Further Education. *FlexiStudy: a Manual for Local Colleges*. 2nd ed. Cambridge, Eng.: National Extension College, c1980.

Brown, Laurence A. *Accounting I (First Offering). Course Evaluation Report*. Lincoln, Nebr.: University of Mid-America, 1975. (ED159970)

Brown, Laurence A. *Accounting I (Second Offering). Course Evaluation Report*. Lincoln, Nebr.: University of Mid-America, 1975. (ED159971)

Brown, Laurence A. *Employment of an Open Learning Course with Traditional and Nontraditional Learners*. Lincoln, Nebr.: Office of Research and Evaluation, University of Mid-America, 1976.

Burt, Gordon. "How Do Readers Comment on the Structure of Teaching Materials?" *Teaching at a Distance*, no. 10, Nov. 1977, p. 67-76.

Burton, John K., David C. Forman, and Robert L. Kennedy. *Learner Evaluation of the State University of Nebraska, fall 1975 and spring 1976 Course Offerings (third and fourth offerings)*. Lincoln, Nebr.: Office of Research, University of Mid-America, 1977.

Clennell, S., and Others. *Teaching for the Open University*. Milton Keyes, Eng.: Open University, 1977. (ED159949)

Council for Educational Technology for the United Kingdom. How to Write a Distance Learning Course: a Self-study Pack for Authors. London, Eng.: Council for Educational Technology, 1980.

Cross, Nigel and Simon Ransome. "Survey of a Project-Based Course." Teaching at a Distance, no. 8, Mar. 1977, p. 59-61.

Duchastel, Philippe. Introducing New Faculty Members to Course Production: an Induction Programme in the Faculty of Technology. Milton Keynes, Eng.: Open University, Institute of Educational Technology, 1977.

Duchastel, Philippe, and others. Notes on the Early Stages of Course Planning. Milton Keynes, Eng.: Open University, Institute of Educational Technology, 1979. (ED191383)

Eggert, John D. Developing Student Achievement Measures. Lincoln, Nebr.: Office of Research and Evaluation, University of Mid-America, 1974.

Eggert, John D. Making It Count (First Offering). Course Evaluation Report. Lincoln, Nebr.: University of Mid-America, 1975. (ED159968)

Gallagher, Margaret. Broadcast Evaluation Report Number One: Analysis M231. Milton Keynes, Eng.: Open University, Institute for Educational Technology, 1975. (ED119667)

Gooler, Dennis D. and G. Roger Sell. Toward a Research and Evaluation Agenda for a Regional Open Learning Program. Lincoln, Nebr.: University of Mid-America, 1975.

Henderson, Euan, and others. "Developmental Testing: The Proof of the Pudding." Teaching at a Distance. no. 10, Nov. 1977, p. 77-82.

Hesse, Irene, and others. Guidelines for Independent Study Authors and Instructors: an Independent Study Project. Minneapolis: University of Minnesota, Continuing Education and Extension, Dept. of Independent Study, 1979.

Lambert, Michael P. and Sally R. Welch, eds. Home Study Course Development Handbook. Washington, D.C.: National Home Study Council, 1980.

Lewis, Brian N. "Course Production at the Open University I: Some Basic Problems." *British Journal of Educational Technology*. v. 2, no. 1, Jan. 1971, p. 4-13.

Lewis, Brian N. "Course Production at the Open University III: Planning and Scheduling." *British Journal of Educational Technology*, v. 2, no. 3, Oct. 1971, p. 189-204.

McIntosh, Naomi E. *Research for a New Institution: The Open University*. (ED064571)

Nathenson, Michael B. "Bridging the Gap between Teaching and Learning at a Distance." *British Journal of Educational Technology*, v. 10, no. 2, May 1979, p. 100-109.

Perraton, Hilary. *The Technique of Writing Correspondence Courses*. Cambridge, U.K.: International Extension College, National Extension College, 1973.

Rowntree, Derek and Brenda Connors, eds. *How to Develop Self-instructional Teaching*. Milton Keynes, Eng.: Open University, Centre for International Co-operation and Services, 1979

Sell, G. Roger. *Introductory Psychology (First Offering). Course Evaluation Report*. Lincoln, Nebr.: University of Mid-America, 1975. (ED159965)

Sell, G. Roger. *Introductory Psychology (Second Offering). Course Evaluation Report*. Lincoln, Nebr.: University of Mid-America, 1976. (ED159964)

Siele, John arap and Gerry Hacker. *Teaching Science at a Distance*. Cambridge, U.K.: International Extension College, 1977.

Spencer, Robert. *Investigating the Use of the Personalized System of Instruction in Distance Education*. Edmonton: Athabasca University, 1980.

Stevenson, Jim. "Science Broadcasting: A Look Towards a 1976 Course." *Teaching at a Distance*. no. 3, May 1975, p. 7-10.

Trommelen, Lynda. *Guidelines for Correspondence Course Writers and Tutors*. Toronto: Toronto Institute of Medical Technology, Division of Continuing Education, 198-?.

Willeke, Audrone B. and David R. Sleeper. *Manual for Course Development*. Minneapolis: University of Minnesota, Continuing Education and Extension, University Media Resources, Dept. of Independent Study, 1976.

Young, Peter L. and Stuart Hosking. *A Guide to Producing External Studies Material*. Victoria, N.S.W.: Education Unit, Warrnambool Institute of Advanced Education, 1979.

COURSE DELIVERY

Athabasca University. Regional and Tutorial Services. *General Handbook for Tutors*. Rev. ed. Edmonton: Athabasca University, 1979.

Baath, John A. *Postal Contacts and Some Other Means of Two-way Communication: Practices and Opinions at a Number of European Correspondence Schools*. Lund: Dept. of Education, University of Lund, 1976.

Barnes, Neil. "Open-Minded Adult Education." *Adult Education*(London), v. 43, no. 6, Mar. 1971, p. 365-370.

Bates, A. W. *Educational and Cost Comparisons Between Open-Network, Cable and Cassette Systems of Multi-Media Teaching*. Milton Keynes: Open University, Institute of Educational Technology, 1973. (ED119660)

Bates, A. W. *Guidelines to Counselors and Tutors on Use of Broadcasts*. Milton Keynes: Open University, Institute of Educational Technology, 1973. (ED119659)

Bates, A. W. *Problems of Learning from Television at a Distance*. Milton Keynes: Open University, Institute of Educational Technology, 1974. (ED119662)

Bates, A. W. *Radio and Television for Teacher Education in the United Kingdom*. 1977. Paper presented at the International Seminar on the Use of Mass Media for the Further Training of In-Service Teachers (Warsaw, Poland, January 1977). (ED187303)

Bates, A. W. *Some Aspects of Educational Broadcasting in Sweden. A Report of a One-Week Study Visit*. Milton Keynes: Open University, Institute of Educational Technology, 1978. (ED187304)

Bates, A. W. *Student Use of Open University Broadcasting: A Survey of 10,537 Students Carried Out in November 1974.* Milton Keynes: Open University, Institute of Educational Technology, 1975. (ED119664)

Bates, Tony. *Appropriate Media and Methods for Distance Education in Norway.* Trondheim: University of Trondheim, Norwegian Institute of Technology, Electronics Research Laboratory, 1979.

Bates, Tony. "Survey of Student Use of Broadcasting." *Teaching at a Distance*, no. 5, Mar. 1976, p. 45-52.

Bates, Tony and Larry Kern. *Alternative Media Technologies for the Open University. A Research Report on Costed Alternatives to the Direct Transmission of Audio-Visual Materials. Final Report.* Milton Keynes: Open University, Institute of Educational Technology, 1978. (ED184522)

Bennie, Frances. *Learning Centers: Development and Operation.* Englewood Cliffs, N.J.: Educational Technology Publications, 1977.

Brock, Dee. "Adult Learning Through Television: The Forging of a New Partnership." *Technological Horizons in Education*, v. 7, no. 6, Nov. 1980, p. 44-45.

Brown, Duncan H. *Educational Broadcasting: Two Lessons from the Open University Experience.* 1980. Paper presented at the Pacific Telecommunication Conference (Honolulu, HI, 1980).

Brown, Duncan H. *Student Attitudes to Radio.* Milton Keynes: Open University, Institute of Educational Technology, 1979. (ED192752)

Brown, Lawrence A. *Learner Responses to the Use of Television in UMA Courses.* Lincoln, Nebr.: Office of Research and Evaluation, University of Mid-America, 1975.

Calder, Judith and Simon Baines. *The Norfolk Experiment.* Milton Keynes: Open University, Institute of Educational Technology, Survey Research Dept., 1978.

California State Postsecondary Education Commission. *Using Instructional Media Beyond Campus.* Sacramento, Calif.: 1979. (ED178085)

Canada Dept. of Manpower and Immigration. Training Research and Development Station. *Canadian Open Adult Learning Systems*. 2nd ed. Prince Albert, Sask.: The Department, 1974.

Carlisle, Robert D.B. *College Credit Through TV; Old Idea, New Dimensions*. Lincoln, Nebr.: Great Plains National Instructional Television Library, 1974.

Clennell, S., J. Peters, and D. Stewart. *Teaching for the Open University*. Milton Keynes: Open University, 1977.

Coldeway, Dan O. *Exploring the Effects of Peer Tutoring in Distance Education*. Edmonton: Athabasca University, 1980.

Coldeway, Dan O. *Individualized Instruction under Control: the Design of Distance Learning Environments to Maximize Learner Success*. Edmonton: Athabasca University, 1980.

Collings, S.N. "The Open University." *Mathematical Gazette*, v. 55, no. 393, June 1971, p. 283-286.

Costello, Neil "Continuing Education: Open for All?" *Journal of Educational Television and Other Media*, v. 7, no. 1, Apr. 1981, p. 4-6.

Curtis, John A. and Joseph M. Biedenbach, eds. *Educational Telecommunications Delivery Systems*. Washington: American Society for Engineering Education, 1979.

Dallos, Rudi. "Active Learning and Television." *Teaching at a Distance*, no. 17, Spr. 1980, p. 39-44.

Daniel, John Sagar and Caroll Ann Keating. *The Telephone in Teaching and Learning: a Guide for Canadian Educators*. Vancouver: TransCanada Telephone System, 1978.

Davies, Norman F. "The Use of the Telephone in Distance Teaching." *English Language Teaching Journal*. v. 32, no. 4, Jul. 1978, p. 287-91.

Dohmen, Gunter, ed. *Open Learning and External Studies*. The Hague, Netherlands: Martinus Nijhoff, 1977. Also published as the *International Review of Education*, v. 23, no. 2, 1977.

Dorn, William S. "Technology in Education: A Case Study of The Open University." *International Review of Education*, v. 20, no. 1, 1974, p. 63-70.

Driskell, Jeanette. *A Guide to Tutoring*. Moscow: University Press of Idaho, 1977.

Durbridge, Nicola. "The Adult Learner and Educational Television." *Educational Broadcasting International*, v. 14, no. 2, June 1981, p. 82-84.

Educational Research Institute of British Columbia. *Learning at a Distance and the New Technology*. Vancouver, B.C.: ERIBC, 1982.

Flinck, Rune. *Correspondence Education Combined with Systematic Telephone Tutoring*. Sweden: Hermods, 1978.

Flinck, Rune. *The Telephone as an Instructional Aid in Distance Education: a Survey of the Literature*. Lund: University of Lund, 1975.

Flinck, Rune. *The Telephone Used in an Experiment of Distance Education at University Level: A Pilot Study*. Lund: University of Lund, 1976. (ED121301)

Gallagher, Margaret. *Broadcasting and the Open University Student*. Milton Keynes: Open University, Institute of Educational Technology, 1977. (ED154797)

Gallagher, Margaret. "Good Television and Good Teaching: Some Tensions in Educational Practice." *Educational Broadcasting International*, v. 11, no. 4, Dec. 1978, p. 203-06.

Gallagher, Margaret and J. Marshall. *Broadcasting and the Need for Replay Facilities at the Open University*. Milton Keynes: Open University, Institute of Educational Technology, 1975. (ED119663)

George, Judith. "Tutorials at Home: A Growing Trend." *Teaching at a Distance*, no. 14, Spr. 1979, p. 19-24.

Grattan, Donald. "Television in Education." *Programmed Learning and Educational Technology*, v. 10, no. 3, May 1973, p. 110-113.

Hugdahl, Edward O. *Continuing Education for Private Piano Teachers: A Breakthrough for the '80s*. 1980. Paper presented at the National Conference on Piano Pedagogy

(2nd, Champaign, IL, October 24, 1980).

Johansen, Robert. *Electronic Education: Using Teleconferencing in Postsecondary Organizations*. Menlo Park, Ca.: Institute for the Future, 1978.

Johansen, Robert, and Others. *Electronic Education: Using Teleconferencing in Postsecondary Organizations*. Menlo Park, Calif.: Institute for the Future, 1978. (ED165774)

Kressel, Marilyn, ed. *Adult Learning and Public Broadcasting: Report of a Project Conducted by the American Association of Community and Junior Colleges with Support Form the Fund for the Improvement of Postsecondary Education (FIPSE)*. Washington, D.C.: The Association, 1980.

L'Henry-Evans, Odette. "Teaching by Telephone: Some Practical Observations." *Teaching at a Distance*, no. 1, Nov. 1974, p. 67-69.

Lucas, William A., Karen A. Heald, and Judith S. Bazemore. *The Spartanburg Interactive Cable Experiments in Home Education*. Santa Monica, Calif.: Rand, 1979.

Macker, E., and others. *Home-based Education: Needs and Technological Opportunities*. Stanford, Calif.: Stanford University, 1976.

Martin, Yvonne M. *An Experimental University Course via Interactive Satellite: Some Findings and Implications*. 1981. Paper presented at the Annual SIETAR Conference (7th, Vancouver, British Columbia, March 11-15, 1981). (ED208843)

Meed, John. "The Use of Radio in the Open University's Multi-Media Educational System." *Educational Broadcasting International*. v. 9, no. 1, Mar 1976, p. 16-20.

Moore, Will Grayburn. *The Tutorial System and Its Future*. Oxford, New York: Pergamon Press, 1968.

Morgan, Robert P. *Applications of Communications Satellites in Higher Education*. 1976. Paper presented at the Conference on Educational Applications of Satellites (Arlington, Virginia, February 2-3, 1977). (ED134235)

Muzzin, Linda J. *Technology in Higher Education: Does It Really Improve Accessibility and Quality and Cost Less in the Long Run?* 1981. (ED207428)

Open University. Committee for Communication Technology. Telephone Tuition Working group. *Tutoring by Telephone: a Handbook*. Pilot version. Milton Keynes: Open University, 1979.

Orton, Larry J. "Improving Two-Way Communication in Correspondence Teaching." *Teaching at a Distance*, no. 11, May 1978, p. 80-91.

Parker, Lorne A. and Christine H. Olgren. *Teleconferencing and Interactive Media*. Madison, Wis.: University of Wisconsin-Extension, Center for Interactive Programs, 1980.

Peruniak, Geoff. *Seminars as an Instructional Strategy in Distance Education*. Edmonton: Athabasca University, 1980.

Read, Gerald H. "The Open University in Britain." *Phi Delta Kappan*, v. 53, no. 4, Dec. 1971, p. 230-233.

Rogers, Jenny. *Using Broadcasts with Adults*. London: British Broadcasting Corporation, 1980.

Russell, James D. *The Audio-tutorial System*. Englewood Cliff, N.J.: Educational Technology Publications, 1978.

Scheffknecht, J.J. *The Tutor: Introductory Considerations Concerning Tutor Training; A Typology of Adult Educators: Analysis of the Constituents of a System for the Continuing Education of Adults*. Strasbourg: Council for Cultural Co-operation, Council of Europe, 1975.

Scupham, John. "Broadcasting and the Open University." *Journal of Educational Technology*, v. 1, no. 1, Jan. 1970, p. 44-51.

Sell, G. Roger. *An Examination of Learning Center Effectiveness*. Lincoln, Nebr.: Office of Research and Planning, University of Mid-America, 1975.

Sell, G. Roger. *A Preliminary Analysis of the Role, Expectations, and Training Needs of the Learning Center Staff of the State University of Nebraska*. Lincoln, Nebr.: Office of Research and Planning, University of

Mid-America, 1975.

Stevenson, Jim. "Media in the Open University: A Look towards the 1980's." *Teaching at a Distance*, no. 19, Sum. 1981, p. 19-23.

Theroux, James and Jock Gunter. *Open-broadcast Radio: Three Strategies*. Ameherst, Mass.: University of Massachusetts, 1975?.

Turok, Ben. "Telephony -- A Passing Lunacy or a Genuine Innovation?" *Teaching at a Distance*, no. 8, Mar. 1977, p. 25-33.

Wangdahl, Agneta. *Types of Face-to-face Contact in Combination with Correspondence Education: a Survey of the Literature*. Lund: Dept. of Education, University of Lund, 1977.

Weinstock, Ruth. "British Open University: Media Used in Context. Educational Technology Revisited: Profile 2." *Planning for Higher Education*, v. 4, no. 2, Apr. 1975, p. 11-16.

West, Peter C. *A Survey and Report of Interest in and Availability of Systems for the Delivery of Instruction by Remote Methods*. Rockford, Ill.: Rockford Regional Academic Center, 1980. (ED192695)

Williams, Ederyn, and others. "Students' Reactions to Tutoring by Telephone in Britain's Open University." *Educational Technology*, v. 15, no. 10, Oct. 1975, p. 42-45.

Worthington, Ross. *Terrestrial Communications Systems in Distance Education: a Reference Booklet*. 1980. (ED198358)

FINANCIAL CONSIDERATIONS

Kiesling, Herbert. "Economic Cost Analysis in Higher Education: University of Mid-America and Traditional Institutions." *Educational Communication and Technology*, no. 1, Spr. 1979, p. 9-24.

Lent, Richard M. *Program Planning and the Cost-Effectiveness Analysis of Instructional Technologies: A Case Study in Planning Continuing Education Services*. 1977. Paper presented at the American Educational

Research Association (New York, April 4-8, 1977). (ED145801)

Lumsden, Keith G. and Charles Ritchie. "The Open University: A Survey and Economic Analysis." *Instructional Science*, v. 4, no. 3/4, Oct. 1975, p. 237-292.

O'Grady, Carolyn. "The Golden Eggs." *Times Educational Supplement* (London), no. 3061, Jan. 25, 1974, p. 23

Rumble, Greville W. S. V. *The Economics of the Open University of the United Kingdom*. Milton Keynes: Open University, Academic Planning Office, 1976. Paper presented to the Anglian Regional Management College/Organisation for Economic Cooperation and Development "International Management Development Programme for Senior Administrators in Institutions of Higher Education," Danbury, 27 June-2 July, 1976.

Sell, G. Roger. *Preliminary Cost-effectiveness Considerations for UMA/SUN*. Lincoln, Nebr.: University of Mid-America, 1974.

Vander Haeghen, Peter. "Independent Study Courses Can Be Very Cost Effective." *Technological Horizons in Education*, v. 8, no. 4, May 1981, p. 52-53, 59.

Wagner, Leslie. "Economic Implications of the Open University." 1976. Paper presented at the O.E.C.D. Institutional Management in Higher Education Third General Conference, Paris, 1976.

STUDENTS

Anderson, Thomas H. and Paul H. Tippy. *An Exploratory Study of Correspondence Students*. Urbana, Ill.: Illinois University, Div. of Univ. Extension, 1971. (ED070960)

Brown, Laurence A. and G. Roger Sell. *A Statewide Survey of Adult Learners: Program Awareness, Nonenrolled participants and Intention to Enroll*. Lincoln, Nebr.: Office of Research, University of Mid-America, 1977.

Brown, Laurence A. *A Survey of Early SUN Program Enrollees: Pre/Post Enrollment Decisions and Attitudes Regarding Their Continuing Education*. Lincoln, Nebr.: University of Mid-America, 1981. (ED204481)

Brown, Robert D., and others. *Adult Learner Characteristics and Their Responsiveness to Multi-Media Instructional Programs Designed for an Open University System*. Lincoln, Nebr.: State Univ. of Nebraska, 1973. (ED086158)

Dodds, Agnes E. and Jeanette A. Lawrence. *Heuristics for Planning University Study at a Distance*. 1981. (ED209992)

Eggert, John D. *Characteristics of SUN Learners (First and Second Offering)*. Lincoln, Nebr.: Office of Research and Planning, University of Mid-America, 1975.

Eggert, John D. *An Examination of Goals of Potential and Actual Learners: University of Mid-America, State University of Nebraska*. Lincoln, Nebr.: Office of Research and Evaluation, University of Mid-America, 1974?.

Hammer, Petra and W.A.S. Smith. *Attrition-completion Study in an Open University*. Edmonton: Athabasca University, 1979. Paper presented at the Conference of the Association of Institutional Research, San Diego, May 13-17, 1979.

McIntosh, Naomi Ellen, Judith A. Calder, and Betty Swift. *A Degree of Difference: a Study of the First Year's Intake of Students to the Open University of the United Kingdom*. Guilford, Surry: Society for Research into Higher Education, University of Surry, 1976.

Sewart, David. "A New Look at the Preparation of Open University Students." *Teaching at a Distance*. no. 15, 1979, p. 20.

Walsh, Patrick L. *An Exploration into Reasons for Non-enrollment in SUN Courses after Requesting Information about SUN*. Lincoln, Nebr.: Office of Research and Evaluation, University of Mid-America, 1975.

Williamson, Carol. *Factors Possibly Influencing an Individual's Decision to Enroll in a SUN course*. Lincoln, Nebr.: Office of Research and Evaluation, University of Mid-America, 1975.

CONFERENCE PROCEEDINGS

Adult Education Research Conference, 21st, 1980, Vancouver. Proceedings. Vancouver: 1980.

Conference on Canada and the Open University: Teaching and Learning at a Distance. Ottawa: 1974.

Conference on Remote Learning, Its Scope, and Attendant Problems, 1977, University of Manitoba. Proceedings. Edited by G. S. Bains. Winnipeg: University of Manitoba, Continuing Education Division, 1978?.

International Communications Conference, 2d, 1976, University of Wisccnsin-Extension. The Status of the Telephone in Education. Compiled by Lorne A. Parker, Betsy Riccomini. Madison, Wis.: University of Wisconsin-Extension, Communications Programs, 1976.

International Conference on Correspondence Education. Proceedings. 1st- 1938- . International Council for Correspondence Education.

National Conference on Open Learning and Non-traditional Study. Procedures. 2nd- 1975- . Published by hosting institution.

National Conference on Open Learning in Higher Education, 1st, 1974, Lincoln, Nebraska. Proceedings. Compiled by C. Edward Cavert. Lincoln, Nebr.: State University of Nebraska, 1974.

PERIODICALS

About Distance Education. No. 5 (February 1978)- . Cambridge, Eng.: International Extension College.

Distance Education. v. 1, no. 1 (March 1980)- . Melbourne, Australia: Royal Melbourne Institute of Technology, School of External Studies.

Epistolodidaktika: A Home Study Periodical. v.1, (1964)- . London, Eng.: European Home Study Council.

Home Study. No. 1 (March 1967)- . Cambridge, Eng.: National Extension College.

The Home Study Review. v. 1 (Spring 1960)- . Washington, D.C.: National Home Study Council.

ICCE Newsletter. v. 10, no. 1 (July 1980)- Cambridge, Eng.: International Council for Correspondence Education.

Teaching at a Distance. No. 1 (November 1974)- Milton Keynes: Open University.

10. APPENDICES

APPENDIX I

10.1 Consultants' Information Request

LETTER TO LIAISON REPRESENTATIVES AT ONTARIO UNIVERSITIES

Re: Distance Education Review

We enjoyed our meeting with you in Toronto on March 18 and found it useful. Not only did it provide us with an opportunity to meet those of you most directly concerned with the subject of the study that we have been engaged to conduct and to hear your perspectives and concerns directly; it provided us with an essential "capsule" review of current levels of involvement with distance education activity and gave us valuable insight into the plans and aspirations of those intending to expand their efforts. We hope, as a result, that this request for information is expressed in terms that make it easier for you to respond than might otherwise have been the case.

We agreed, I recall, to provide a definition of "distance education" to be used at this stage at least for the purpose of data gathering. A number of descriptors are used somewhat synonymously to identify areas of educational activity that fall within (or share many characteristics with) distance education: correspondence study, home study, independent study, external studies, distance teaching and distance learning. At this stage, we include all of the above within a working definition that has two primary elements:

-- the physical separation of teacher and learner;
-- the use of technical media (print and/or electronic) to carry educational content.

Our definition does not preclude modes of delivery which involve direct teacher-learner dialogue through occasional or even regularly scheduled meetings for the purpose of giving academic advice, provided that these are not the primary means of transmitting educational content. While we are seeking information with respect to distance education activities at the University level, we are not restricting the scope of our information request to the degree credit area.

On the basis of the information provided at the meeting and our review of the data that we have thus far been able to obtain, it is apparent that Ontario universities have a wide range of degrees of involvement with distance education. Among those institutions that have significant offerings, modes of delivery and media mixes vary greatly. For these reasons, and to enable as comprehensive a response as possible, we have decided not to adopt a prescriptive "questionnaire" format. Instead, we are seeking a submission from each institution having the following content:

1) A description of the organizational context within which distance education courses are developed and delivered at your institution. (Is a central office responsible for development of learning materials?...are academic departments responsible? Is a central office responsible for delivery?...academic departments? Where are the costs borne? In short, who is responsible for what?)

2) Tabulations of course offerings in the current year (1981-82) and for the past three years, indicating course registrations by course, course level and the degree programme to which each course is creditable.

3) A tabulation of completion rates by course for the past three years.

4) A tabulation of course registrations by geographic location of student for the current year, by course if possible, and for the past three years if the data is available.

5) Tabulations of course offerings in the current year and for the past three years, indicating the primary delivery medium and the other media (if any) supporting delivery. (Media = Print, Audio-tape, Radio, TV broadcast, TV cable, Teleconferencing, Other (specify). With respect to Radio and TV broadcast, indicate the call letters of the carrier.) If tutorial services are provided, indicate the mode of provision. (Mode = in-person, Correspondence, Telephone, Other (specify).)

6) A listing of courses for which primary learning materials have been developed by your institution indicating the status of the principal author or subject matter specialist. (Status = Secondment from academic department, Assignment within regular teaching load, Assignment beyond regular teaching load, Engagement as consultant, Other (specify).)

7) A listing, by course, of direct costs of development of learning materials developed by the institution. Direct costs of development include salary costs for academic, editorial and instructional development staff; copyright and permission fees; and the supplies, materials and services costs that can be attributed to producing the "master copy" of the course materials. If actual cost information is not available, please provide estimates, setting out assumptions.

8) A listing of courses for which learning materials or major components have been developed in collaboration with other institutions, organizations or agencies, indicating the organization, the nature of the relationship and the costs incurred by your institution (or estimates thereof).

9) A listing of courses acquired through purchase or exchange indicating the source of each and the financial arrangement involved.

10) A listing, by course, of the direct costs of delivery per student. Delivery costs include materials costs, postage, telephone, and other communications costs, tutorial costs, marking costs, etc. If actual costs are not available, please provide estimates, setting out your assumptions.

11) A description of tutorial services, counselling services and/or other services provided to distance education students and the means of delivery of these services.

12) A listing of courses exchanged or sold to other institutions identifying the institution and the financial arrangements involved with sale or exchange.

13) An estimate of the potential that you and your colleagues believe your institution to have in distance learning. Please be as specific as you can with respect to subject areas, courses, enrolments, target groups, delivery media, etc. Ignore the current financial situation.

14) An estimate of the potential that you and your colleagues believe your institution to have (in the same terms as in 13) taking into account the current financial climate.

15) Copies of documents setting out such institutional policies as may exist with respect to distance education; off-campus teaching; the development, sale and/or exchange of instructional materials; and/or copyright. (Any or all of these policies may be subject to provisions of a Collective Agreement. If so, please include copies of relevant sections.)

A few of the Liaison Representatives attending the meeting on March 18 mentioned studies and reports undertaken within their university or by organizations of which they are members. We would appreciate your forwarding copies of any such reports that you may be able to make available. In addition, if there are other reports that you feel we should be aware of, please include a copy or provide advice regarding sources.

Despite the rather comprehensive nature of the list set out above, we may have failed to include some elements that you believe to be important. If so, please include any additional information or comment that you feel may be useful to use. Also, you may wish to comment about the form or forms of coordination of distance education that, from your perspective, have the most promise.

With respect to timelines for response, in order to meet the schedule for reporting established by the Council, we will require your submission no later than April 23, 1982. Please forward it to:

Mr. Barry L. Snowden
c/o Office of Vice-President
Finance and Facilities
Athabasca University
12352 - 149 Street
Edmonton, Alberta T5V 1G9

Should you have any questions regarding the information request or should you wish to have advice with respect to any problems, please contact Mr. Snowden at (403) 455-5477 (Office) or (403) 435-2817 (Residence). Should you wish to discuss any aspect of our study with me, please do not hesitate to call or write:

W.A.S Smith
c/o Office of the Vice-President (Academic)
The University of Calgary
2500 University Drive N.W.
Calgary, Alberta T2N 1N4

Telephone: (403) 384-6580 (Office)
(403) 282-6213 (Residence)

Finally, we recognize the time and effort that will be required to prepare the submission we are requesting. Please accept our expression of gratitude in advance and convey our appreciation to others who may be involved in the preparation of your response.

Sincerely,

for W.A.S. Smith

APPENDIX 2

10.2 Individuals and Organizations Contacted in Course of Study

10.2.1 University Liaison Representatives

Brock University	J.F. Bird	Director, Part-Time Programs
Carleton University	F. Gildenhuys	Director, School of Continuing Education
University of Guelph	M. Waldron	Director, School of Part-Time Studies and Continuing Education
Lakehead University	D. Pakulak	Assistant Registrar, Continuing Education
Laurentian University	P. Blenkinsop	Director, Centre for Continuing Education
McMaster University	R.D. Day	Professor of Psychology
	P. George	Dean of Social Sciences
Ontario Institute for Studies in Education	D. Ryan	Assistant Director
University of Ottawa	D. Carrier	Asst. Vice-Rector, Academic
	Y. Albert	Acting Director, Continuing Education
Queen's University	M.R. Wardle	Executive Assistant to the Dean of Arts and Sciences
Ryerson Polytechnical Institute	S. D'Antoni	Director, Distance Education
University of Toronto	D. Green	Director, School of Continuing Education
Trent University	S.F. Gallagher	Professor of English Literature
University of Waterloo	J.C. Gray	Director, Part-Time Studies and Continuing Education
University of Western Ontario	T.N. Guinsburg	Dean of Part-Time and Continuing Education
Wilfrid Laurier University	J.A. Weir	Vice-President, Academic
	M. Croft	Associate Director, Part-Time Studies & Continuing Education
University of Windsor	G. Booth	Director of Part-Time Studies
York University	S. Levy	Assistant Vice-President (Academic Planning
	T.A. Meininger	Associate Dean, Atkinson College
Council of Ontario Universities	C.G. Clarke	Deputy to the Executive Director
	J. Matthews	Acting Director, Office of Teaching and Learning

10.2.2 Others

1) The Ministry of Colleges and Universities - Mr. Roger Cummins, Director, University Relations Branch and Mr. B. James MacKay, University Affairs Officer.

2) The Ontario Council of University Affairs - Dr. Burton Mathews, Chairman.

3) OECA/TVOntario - Dr. James Parr, Chairman, and Dr. Ignacy Waniewicz, Director, Office of Development Research.

4) The Open College - Ms. Judy Wells, Education Officer.

5) The Sudbury District Roman Catholic Separate School Board - Mr. Onesime Tremblay, Director of Education and Secretary of the Board.

TVOntario

2180 Yonge Street
Toronto, Ontario
(416) 484-2600
Telex 06-23547

Mailing Address
Box 200, Station Q
Toronto, Ontario
Canada M4T 2T1

APPENDIX 3

Toward an interuniversity service to provide media supported distance education in Ontario

A progress report on a preliminary inquiry

Ignacy Waniewicz
Director
Office of Development Research

June 1982

This progress report deals with the results of preliminary inquiries carried out by the Office of Development Research of TVOntario on the possible ways and means of introducing an interuniversity service in Ontario to offer distance education courses leading to an undergraduate degree for adult learners. Further reports will be prepared on the subsequent stages of inquiry.

Background

Research is an integral part of the mandate of TVOntario, as it is explicitly stated in its founding Act. Part of this research is directed to provide an exploration base for the evolution of TVOntario services through a continuous investigation of social trends and educational needs and interests of the Ontario population; through monitoring developments in educational technology, as well as through the exploration of new methods and techniques in the use of the media for learning at home and through institutions. Studies on educational needs and interests were initiated by us as early as 1970/71. The first inquiries dealt with the learning needs of ethnic groups, housewives, industrial workers, non-urban residents and youth in the Toronto area. This laid a foundation for program policies at the time when only one OECA transmitter, Channel 19 in Toronto, was in operation. Subsequently, similar studies were undertaken in several coverage areas of future TVOntario transmitters. In the mid '70s, a major study on the demand for part-time learning in Ontario was carried out. This study attracted many readers outside TVOntario from among those who are concerned with the provision of educational opportunities for the adult population. In the subsequent years a number of other studies were undertaken, some of them of a continuous nature, dealing with the possible use of media for meeting some of the needs identified in the study

"Demand for Part-Time Learning in Ontario." In cooperation with several universities and colleges, studies were carried out for the development of series of television programs with a threefold purpose: to support the teaching/learning process within post-secondary institutions, to help set up courses which could be studied in the distance learning mode, and to provide stimulating educative experience to various segments of the general viewing public. Thanks to this cooperation, several significant television series have been produced and new ones are at present in the production process.

In the area of educational applications of new technologies, successful experiments were carried out with the use of computer-managed learning (CML) in combination with especially designed print material and series of television programs to provide structured non-formal learning opportunities at home for people sharing certain interests. These learning systems, called TVOntario Academies, dealt so far with matters of public health, parenting and music. A new Academy dealing with the educational application of microcomputers, designed for Ontario school teachers, is now being produced.

The inquiry discussed in this report is concerned with the need to enable adults to learn at a distance at the university level. We feel, and we shall try to corroborate our view in our second report, that a growing number of mature adults are interested in university study. In the forthcoming 15 to 20 years there will be in Ontario, as well as in other areas of the North-American continent, an unprecedented large number of people of age 25 to 50. Over 40% of Ontario's population will be of this age. Scores of thousands of them will want to begin or to resume university study, provided that the universities can do something to alleviate some of the institutional, situational and dispositional barriers, which at present do not let them take advantage of the existing system.

We know that at least some universities in the province recognize this problem and undertake some efforts to meet these growing needs. However, these efforts are still very shy; they are undertaken by the universities in isolation from each other; they are usually targeted toward limited local audiences, and often to students who are already enrolled at the university; in most cases the scope of envisaged course-offerings is limited; they lack longer-range planning and a cohesive instructional design; the production and support services seem to have at their disposal exceedingly scant financial, technical and personnel resources. The entire infrastructure seems to be much too fragile to be able to provide a reliable service which will in the opinion of the prospective clientele be comparable to regular university study.

There is then, in our opinion, an urgent need for new policies and approaches on behalf of the universities leading to setting up a solid, credible and integrated distance-learning system in which these part-time learners would not be treated as a marginal group of secondary importance to the university community, but as a primary target clientele. Such a system would pay particular attention to people of those age groups, socioeconomic backgrounds, family connections, geographic locations, occupational environments, etc., for whom the presently available facilities and arrangements are not suitable or not flexible enough to meet their needs. Distance learning courses would be developed not just for the few dispersed individuals living usually in remote areas, but for those large aggregations of white-collar and blue-collar workers, homemakers, working mothers, managers, sales people, disabled persons, etc., who cannot adapt themselves to stiff schedules, who cannot easily leave home too often, who want to study things which are not being offered locally, who want to study at their own pace.

These learners require curricula designed to meet their occupational, personal, family and recreational needs; materials which will attract their curiosity and will stimulate their desire for further learning. They require learning materials which are especially designed to sustain interest, to help cope with abstract concepts, to relate to real-life experiences, and to substitute for at least some of the interaction which usually occurs on the univeristy campus. They require special channels of two-way contact for advice and consultation, they require assignments, tests, and self-evaluation material especially designed for this type of learner. The need audiovisual materials to unravel complex problems, explain abstract ideas, illustrate practical applications; they need media which will help them to be exposed to a great variety of views, opinions, attitudes. They also require opportunities for learner interaction and face-to-face contacts which may be less frequent but not less meaningful than those experienced by on-campus students.

Experience of several countries, including Canada, shows that such a distance learning system cannot be established by a single university on its own, unless a special institution for this purpose is founded. The setting up of this type of course and the development of professionally designed, high-quality materials is too costly to be economically justified for small audiences. The very concept of distance education assumes that large numbers of learners from vast geographic areas could be served from one source (although the existence of local tutorial and consultation centres is in many cases indispensible).

It appears that in Ontario, the establishing of a new institution especially for distance learning (as, for example, the British, Dutch, Israeli and a number of other national Open Universities and the provincial institutions in Alberta and British Columbia) would be unnecessary if the existing universities were to work in common in this area. This would require a significant measure of cooperation between several, if not of all, universities, a degree of collaboration which may go well beyond present practices. At the same time, TVOntario should prepare itself to take on the role of a major, large-scale producer and distributor of a variety of educational materials ranging from conventional television programming, broadcast and cablecast; through videotape, audiotape, and videodisc; to microcomputer software and Telidon. This will require a new mode of cooperation between TVOntario and particular universities or their partnerships.

The Preliminary TVOntario Inquiry

In the Fall of 1981, we initiated a preliminary exploration of the feasibility of such a media-supported interuniversity service. The purpose was:

- to identify several Ontario universities interested in investigating the possibility of setting up such a service in association with TVOntario;
- to develop an initial list of at least 30 half-courses which could be offered;
- to identify faculty members interested in preparing such courses;
- to commission a collection of preliminary course proposals which will also describe the media and resources to be used, the methods of learning evaluation and student-faculty interaction.

We invited Janette Baker of the Educational Development Office of York University in Toronto to coordinate this stage of our inquiry acting on behalf of the Office of Development Research of TVOntario.

An initial list of 30 half-courses which could possibly be offered by such a service was developed. In selecting particular items from this list, we took into account the following considerations:

- the perceived attractiveness of the subject to adult learners (based on our research and observation);
- the perceived attractiveness of the subject to the general television audiences;
- the existence of quantitatively and qualitatively substantial media material produced by TVOntario or other professional production houses.

Because of the scarce resources we had at our disposal, we initially planned to limit our inquiry to four universities including the two in Toronto. Subsequently, however, responding to a keen interest, two more universities were added. The coordinator, as a result of discussions with senior administrators (e.g., presidents, vice-presidents, deans of continuing education, etc.), identified faculty members who would be interested in preparing brief course outlines on subjects included in our initial list. Altogether over 60 senior administrators and faculty members have been contacted, including the 30 who were asked and agreed to prepare the course outlines.

Most senior administrators expressed a considerable degree of interest in the project, and only at one university were some of the administrators negative to the idea of formal university study via distance education. Several institutions had already done some work on their own for further development in the areas of distance education and, some also in the use of media in education. In the course of these conversations, a number of issues were raised considering both the positive and negative aspects of our project. These will be discussed later on in a broader report which will be prepared later this year.

A real discovery for us was the generally supportive and often enthusiastic attitude of highly respected and prominent faculty members about distance education. All the professors whom we have contacted knew about correspondence courses; some had prepared them. All knew about the British Open University, however, few had heard of the Athabaska University in Alberta and the Open Learning Institute in British Columbia. Most of those who were asked accepted our invitation to prepare course proposals. Several declined because of other commitments, and only two faculty members reacted somewhat negatively, although for different reasons, to our proposal. Most of the faculty members who we contacted were intrigued with the idea of distance education and were eager to investigate ways to make such courses an excellent educational experience for students. Although some of them pointed out that they were inexperienced in putting together a distance education course and suggested that they would need help if the project came to fruition, the prepared course outlines contained many creative ideas concerning the type and format of the learning resource materials, the modes of interaction between faculty and the learners at a distance, and the evaluation methods. One of our future reports will be devoted to the presentation and analysis of these ideas.

At present, 28 of the commissioned outlines have been received. They include the following:

Liberal Democracy in Canada

Edwin R. Black, Professor
George Perlin, Professor
Department of Political Studies
Queen's University

The Quality of Life in Canada Today

Bernard R. Blishen, Professor
Department of Sociology, Faculty of Arts
York University

The Management of Human Resources in an Economy in Crisis

David B. Booth, Associate Professor
Department of Sociology-Anthropology
University of Windsor

Communication Transactions in Organizational Careers

T. F. Carney, Professor
Department of Communication Studies
University of Windsor

Creative Writing

Don Coles, Professor
Director, Programme in Creative Writing
Faculty of Arts and Fine Arts
York University

The Religious Mosaic

J. Cook, Professor
C. G. Hospital, Professor
Department of Religion
Queen's University

Sociology of Cooperation

Jack Craig, Professor
Faculty of Environmental Studies
York University

Introductory Criminology

Anthony N. Doob, Professor
Director, Centre of Criminology
University of Toronto

Climatology

T. J. Gillespie, Associate Professor of Meteorology
Department of Land Resource Science
Ontario Agricultural College
University of Guelph

Digging Up the Past

Diet K. Hagel, Associate Professor
Department of Classics
Queen's University

Native Peoples in Canada: Social, Cultural and Economic Dimensions

Peter Homenuck, Professor
Faculty of Environment Studies
York University

Philosophical Issues in Feminism

Barbara Houston, Professor
Faculty of Education
Althouse College
University of Western Ontario

An Introduction to Industrial Relations

John Kervin, Professor
Centre for Industrial Relations
University of Toronto

Land -- Use of a Major Ontario Resource

Mark Lapping, Professor
Director, University School of Rural Planning
University of Guelph

Probing Revolution: Part I -- The French Revolution

James A. Leith, Professor
Department of History
Queen's University

Human Sexuality

Sam R. Luker, Professor of Family Studies
Chairman of Part-Time and General Studies
Faculty of Part-Time Studies
School of Part-Time Studies and Continuing Education
University of Guelph

Financial Mathematics

Ian B. MacNeill, Professor
Chairman, Department of Statistical and Actuarial Science
Faculty of Science
University of Western Ontario

Understanding the Adolescent

MarySue McCarthy, Professor
Faculty of Education
York University

Public Administration: The Central Decision Making Structure

A. K. McDougall, Associate Professor
Department of Political Science
Faculty of Social Science
University of Western Ontario

Public Administration: Administration as Action

A. K. McDougall, Associate Professor
Department of Political Science
Faculty of Social Science
University of Western Ontario

Working and Understanding It (Sociology of Work)

Lorna R. Marsden, Professor of Sociology
Associate Dean, Division II
School of Graduate Studies
University of Toronto

Exceptional Children

G. A. V. Morgan, Professor
Department of Family Studies
College of Family and Consumer Studies
University of Guelph

Behaviour and the Brain

Peter H. Platenius, Professor
Chairman of Undergraduate Studies
Department of Psychology
Queen's University

Children's Literature

Mary H. Pritchard, Professor
Program Coordinator
Faculty of Part-Time and Continuing Education
University of Western Ontario

Marital and Family Relationships in Canada

Benjamin Schlesinger. Professor
Faculty of Social Work
University of Toronto

Housing for Canadians

Joan Simon, Associate Professor
Department of Consumer Studies
College of Consumer Studies
University of Guelph

Decision Analysis

I. P. Suttie, Associate Professor
Faculty of Social Science, Secretarial and
Administrative Studies
Middlesex College
University of Western Ontario

Quality of Working Life

Eric Trist, Professor, Research Program
Quality of Working Life
Faculty of Environment Studies
York University

A summary of the proposals is given in the appendix.

Possible Courses for Further Research and Development

An important development took place in February this year when we were informed by the Executive Director of the Council of Ontario Universities that the COU has decided to conduct its own feasibility study complementary to that underway by our Office of Development Research.

The terms of reference of the COU study are as follows:

1. To review existing and planned activities of the Ontario universities in distance education;
2. To assess the feasibility of a cooperative approach to university distance education in Ontario;
3. To recommend on the desirable organizational approach to expanding cooperation among the universities and between the universities and TVOntario;
4. To recommend on the form of cooperation, assessing alternatives such as:
   - an expanded and better coordinated range of individual course offerings;
   - development of an integrated degree programme for adult part-time learners;
5. To advise on the desirability of developing in Ontario additional educational opportunities specifically designed for adult part-time learners;
6. To advise on cost considerations and time requirements of the above; and
7. To recommend on further action.

It is hoped that the COU study will significantly enhance a cooperative approach to distance education in Ontario. The direction of further inquiries by TVOntario will to a considerable degree depend on the outcome of the COU study. However, TVOntario expects to continue research in the following areas:

- continuous monitoring of needs and interests in various forms of lifelong education;
- the development of sample course material from which further inquiry could be conducted on such aspects as:
    - the content load and educational function of the various course components, e.g., the printed correspondence materials, media elements, face-to-face sessions, correspondence tuition, counselling, evaluation, etc.;
    - the educational potentialities and limitations of the particular media and their delivery methods, e.g., broadcast television, cable television, home videotape and disc, audiotape, personal microcomputers, teleconferencing, etc.;
    - the production and distribution requirements in terms of time, technical facilities, personnel, finance and organizational structure;

  - the possible modes of cooperation between the universities or their consortia and TVOntario;
  - funding possibilities, etc.

- the monitoring of the developments in modes of distribution with particular attention to cable, satellite, teleconferencing, home video and personal computers.

APPENDIX

SUMMARY OF COURSE OUTLINES
As Proposed by Authors

Liberal Democracy in Canada

Edwin R. Black, Professor
George Perlin, Professor
Department of Political Studies
Queen's University

The course will introduce its audience to some of the leading questions involved in the study of political life and to the major structures and processes of contemporary Canadian politics at the federal level. Students will be lead to assess government's performance against the standards of liberal-democratic theory and those of its critics. It will attempt to develop standards of criticism and techniques of analysis, to permit independent assessments of government institutions and processes. A combination of television/videotape and print media will be used.

Students would be expected to attend 4-6 weekend sessions at convenient institutions. Regular problem assignments, essays, tests, etc., would be supplemented through telephone contact and audiocassette commentaries.

The Quality of Life in Canada Today

Bernard R. Blishen, Professor
Department of Sociology
Faculty of Arts
York University

The course will introduce students to the various attempts to measure material well-being in Canada and also the U.S.A. Indicators of objective social and economic conditions presume to reflect the quality of life and provide reasons for the discontent with objective conditions that appear to be improving. The development of an understanding of the gap between objective indicators of the quality of life and indicators of the individual's satisfaction with the quality of life will be the main objective of the course.

The resource materials would include a study guide, a reading list, and several television programs.

Two written assignments would be required of each student. Students would receive written instructions on how to prepare these assignments and how they would be evaluated. After each assignment the student would receive a detailed evaluation.

The Management of Human Resources in an Economy in Crisis

David B. Booth, Associate Professor
Department of Sociology-Anthropology
University of Windsor

The course will deal with practical themes in approaches to personnel management, and will be of special interest to people now working in this field, or expecting to, as well as to union stewards, members of minority groups and people working with minority groups. The course will take full account of current economic problems and will relate these to changing needs of personnel management in the various regions of Ontario. It includes topics such as goal-setting in an age of scarcity, training and development, new developments in employee evaluation, and rewarding and dehiring.

Each module of the course will contain a television/videotape program, an instructional guide for students, assigned and recommended readings and an applied assignment that builds on each of these elements. The required texts, supplementary readings and videotapes/films will be available in regional centres. Students would be encouraged to interact with one another and with people experienced in the field in their own communities.

Students would attend three weekend tutorial sessions at the beginning, middle and end of the course. Other instructor/student contact would be maintained by telephone and by audio-taped, as well as written, instructor comments on student assignments.

Evaluation of students will take into account divergent learning styles based on a course pre-test. Student self-assessment will be built into each module. Grading will be based on student effort in completion of the assignments and participation in the weekends. There will be no formal written examinations.

Communication Transactions in Organizational Careers

T. F. Carney, Professor
Department of Communication Studies
University of Windsor

The course will focus on the critical communications transactions normal in a career within an organization:

- the stages of entry, establishment and advancement;
- the capabilities needed to cope with the communications environment of organizations with special reference to techniques for career management.

The course is based upon the literature and techniques developed by academic specialists in organizational communications. But it draws heavily upon the work of career-development consultants, employment agencies, executive search firms, human resource development specialists, personnel managers and professional outplacement firms. The course surveys career stages, choice points and skills both from the viewpoint of the firm (as in manpower planning) and from that of the individual (as in career management). The idea is to provide a balanced, not one-sided, overview.

The course will be designed with the following types of learner in mind:

- students planning to move into the work force entering upon their first career-related job;
- mid-career employed persons involved in the intense competition for advancement normal at this phase;
- persons seeking to re-enter the labour force after time out;
- those contemplating mid-career changes in their line of work.

Special provision will be made, in course design and bibliography, for coverage of problems faced by women in securing career advancement and recognition.

Creative Writing

Don Coles, Professor
Director, Programme in Creative Writing
Faculty of Arts and Fine Arts
York University

The course is based on the view that while "talent," the creative gift, cannot be taught, certain skills and techniques in writing can be communicated.

The course format foresees workshop sessions, videotapes, and submission of manuscripts on a weekly basis. The students would also receive each week a sample of writings by established writers, together with a brief commentary, for the purpose of stimulating students to attempt a perhaps unfamiliar mode or theme.

The Religious Mosaic

J. Cook, Professor
C. G. Hospital, Professor
Department of Religion
Queen's University

The primary objective of the course would be to develop a greater understanding of the major religions of humankind through direct contact with representatives of those faiths living in Canada. It is also expected that the course would make an effective contribution towards a greater religious tolerance within Canada, and to a heightened awareness of mutual concerns.

The core of the course will rely heavily on television materials and supplementary audiotapes, in addition to required texts. A study guide will be prepared. Careful attention will be given to the availability in Canada of literary resources covering selected religious materials.

Contact with students would be essentially by telephone. Audiotapes would also be used for more extensive communication and for the supply of information relating to cultural aspects of the course, such as music or religious chanting. One major collective seminar would be held midway through the course in a central location.

Students would be evaluated on the basis of at least two written essay assignments and a proctored final examination.

Sociology of Cooperation

Jack Craig, Professor
Faculty of Environmental Studies,
York University

The course has two objectives: 1) to examine the social philosophy and sociological theories of cooperation in human groups; and 2) to examine ways of increasing cooperation in workplace settings, community organizations, business organizations, and among organizations within society. The course will examine theories that attempt to explain why humans cooperate and the conditions under which people cooperate.

It explores the social philosophy and sociological theories of how cooperation can be enhanced within various sizes of groups. It will focus on research and descriptive material about voluntary associations and cooperative organizations that try to apply cooperation in business and social organizations.

The learning resources will include a textbook which covers the theoretical and conceptual materials of the course, a study guide, and a series of television/videotape programs.

Faculty/student interaction will be maintained through audiotapes between instructor and individual students, assignments with written responses from the instructor, conference calls and two one-day face-to-face sessions. The assignments and an oral examination will be used to evaluate students' achievements.

Introductory Criminology

Anthony N. Doob, Professor
Director, Centre of Criminology
University of Toronto

A problem that anyone faces who tries to teach introductory criminology to people working in the field or to a general audience of students is that many people feel that they "know" all there is to know about crime and criminal justice. A policeman "knows" what "criminals" are like; a judge "knows" what kind of sentence will "reform" an offender; a parent "knows" how to keep a child from becoming a juvenile delinquent; a member of the general public "knows" whether police are effective in controlling crime. The problem, of course, is to introduce a certain amount of social science skepticism and analysis to this "knowledge." The introductory criminology course should, then, introduce the student to the social scientific study of crime, the criminal justice system, and related aspects of these phenomena. It will deal with issues such as what is crime, how do we know about crime in our society, what are the common explanations of crime, how does the criminal justice system operate, the juvenile justice system, what might be done to reduce crime.

The course materials would consist of a textbook, selected journal articles, media accounts of crime, media reports and public figures' views of crimes, and the operation of the criminal justice system, radio/television/print dramatizations of real cases.

Contact with students in this course is very important. Frequent assignments would aim at encouraging students to apply the knowledge they are acquiring. The evaluation of these assignments would be complemented by a proctored examination.

Climatology

T. J. Gillespie, Associate Professor of Meteorology
Department of Land Resource Science
Ontario Agricultural College
University of Guelph

The objectives of the course are to teach fundamental principles concerning energy, force, pressure and temperature using familiar examples of meteorological processes. The students will learn to explain and, to a limited degree, predict micro climates; the meso-scale phenomena of lake and land interactions, thunderstorms and urban heat islands; how micro-scale phenomena control daily weather changes and long-term climatic changes; to adapt available weather forecasts to their own locality using observations including temperature, wind, clouds and barometric pressure. Emphasis will be placed on the relevance of the content to the adult learner taking into account that the physics and mathematics skills of the learners may not be too strong. At present no suitable single text for such a course is available, therefore new materials will be needed to refer a learner to readings, in addition to outlining the basic study material.

An important component of the course materials would be videocassettes using animation to demonstrate certain concepts, as well as to illustrate various phenomena. Considerable advantage can also be derived from the use of audiocassettes accompanied by a series of slides.

The faculty-student interaction could take a variety of forms including teleconferencing and periodic face-to-face interaction.

Evaluation would consist of a number of tests entailing simple calculations as well as a proctored final examination. Completion of a minimum number of modules would also be required to pass the course.

Digging Up the Past

Diet K. Hagel, Associate Professor
Department of Classics
Queen's University

The course is an attempt to interrelate contributions to knowledge made by archaeology, theology, art history, biology and anthropology. Through a survey of aspects of the past, the course will provide a picture of the total potential of man. It will deal with motifs and motivations of archaeologists, the history of archaeology, refinement and evaluation techniques and the contribution of archaeology to the understanding of man.

An extensive study guide delineating the course content will be prepared. There is a heavy reliance on visual materials. Contact with students will be maintained through correspondence, telephone, and audiocassettes.

The evaluation will consist of essays and a proctored examination.

Native Peoples in Canada: Social, Cultural and Economic Dimensions

Peter Homenuck, Professor
Faculty of Environment Studies
York University

The objectives of the course are to provide an increased understanding and broader knowledge of Canada's Native Peoples. It will include an analysis of population structure and trends, a review of the various groups within Canada, their historical relationships with each other and their territorial movements, a review of values and culture, an examination of issues relating to social welfare, education and economics in community development, aboriginal rights and treaties, and policy and administration.

The resource materials will include a workbook, textbooks and reading packages, a series of television programs, and telephone consultations.

Interaction with students will be maintained through two face-to-face sessions and a direct liaison with course assistants. A mechanism for interaction between students will be established.

The students will be evaluated on the basis of two essays and a final written proctored examination.

Philosophical Issues in Feminism

Barbara Houston, Professor
Faculty of Education
Althouse College
University of Western Ontario

The goal is to introduce philosophical issues central to the feminist perspective. The objectives are: a) to acquaint the student with the ideas and arguments of prominent feminist theorists; b) to develop the students' abilities to critically appraise conventional and feminist views on issues that are matters of social concern; c) to provide the basis for students to contribute to the academic study of these social issues; d) to encourage students to reflect on the significance of these issues in their own lives.

The majority of the older students returning to higher education are women and the issues dealt with in the course often have a special appeal to this group. The course will also be attractive to those generally interested in matters that have an impact on public policy.

The learning resources will consist of textbooks, a course resource book and study guide, exercises and argument analysis, and films and videotapes.

The faculty/student interaction will entail telephone calls during specified hours, written or audiotaped evaluation of students' work, conference calls, audiotapes to answer students' questions, and face-to-face meetings.

The evaluation will be carried out through worksheets, tests, essays or projects and a final examination.

An Introduction to Industrial Relations

John Kervin, Professor
Centre for Industrial Relations
University of Toronto

The objective of the course is to provide students with an understanding of the roles of unions, management and government in the work place, and to examine the historical and present day context of industrial relations, collective bargaining, strikes, etc.

The learning resources will consist of a combination of audio-visual material and readings. A study guide will outline the basic issues contained in each unit of learning. Supplementary readings will be assigned from texts readily available in Ontario.

Frequent assignments will be returned to students with written comments. Telephone consultations will be made possible at specified times. Face-to-face meetings between students would be encouraged.

Evaluation could include the techniques of computer-managed learning, written assignments and projects, and proctored examinations.

Land -- Use of a Major Ontario Resource

Mark Lapping, Professor
Director, University School of Rural Planning
University of Guelph

The objectives of the course are to develop an understanding of the complexities which surround land issues in Ontario and to provide an intellectual basis for continued examination of land-related issues and problems. The course will provide mature adults with the mechanisms for the examination of problems of a topical nature and a framework for the linkage between local and larger societal concerns. The content will be organized around such questions as: How is land perceived? How is it formed? How is it owned? How is it used? What is the law of the land? What are its economies? What are the current concerns related to land in Ontario?

A book of readings will have to be created which will also contain guidance for self study. Television/videotape programs will provide an overall visual context or environment for certain phenomena. Occasional field trips would have to be organized and lead by instructors and teaching assistants.

Faculty-student interaction will be in the form of several one-day workshops held on weekends and systematic telephone contacts. Individual interaction would be possible through correspondence and telephone.

Evaluation will be carried out through course papers returned with comments to the students, assessment of participation in workshops and through a graded final examination.

Probing Revolution: Part I -- The French Revolution

James A. Leith, Professor
Department of History
Queen's University

This course is designed to provide one of a possible series on modern revolutions. Its objective is to investigate the origins, causes and outcomes of the first great social revolution of modern times, as an introduction to the later revolutions which have helped to shape the modern world. It will excite an interest in the study of history through demonstrating the techniques and the kinds of evidence historians use in reconstructing a picture of past events. The course will also help in developing the students' skills in researching and reporting.

The resource materials will consist of a course outline, a basic bibliography, a collection of books available by mail or in local depots, a special collection of original documents, as well as tables, charts, maps and calendars to complete the text. A series of video programs will put emphasis on how the means of mass persuasion were used for the purpose of the revolution.

Interaction with students would be achieved through open line telephone communications, as well as by face-to-face seminars or workshops.

Students' work would be evaluated through a research paper and a two-hour proctored examination.

Human Sexuality

Sam R. Luker, Professor of Family Studies
Chairman of Part-Time and General Studies
Faculty of Part-Time Studies
School of Part-Time Studies and Continuing Education
University of Guelph

The target audience would consist of teachers, counsellors, public health nurses and other professionals interested in a study program in the domain of family sex therapy or public health. The course could be offered for credit or non-credit. For those wanting academic recognition it would be available in two parts, each complete in itself and worth one half credit.

Using an interdisciplinary approach, the first half of the course surveys the basic biological, psychological and sociological component of sexual behaviour and briefly reviews the sexual life cycle of the individual. The second half discusses some of the broad social and moral concerns and explores sexual counselling, sex education and the sexual needs and actions of special groups. The emphasis is on understanding how social and psychological factors affect our sexual development. Less importance is placed on the purely biological aspect. Topics of current interest and concern such as child pornography, homosexuality, and the sexual needs of the elderly are examined. Causes and treatment of sexual dysfunctions, sex and the handicapped, and education for sexuality are considered.

Learning materials will include a study guide, textbook, audiocassettes, and a series of television programs for broadcast and videotape viewing.

Faculty-student contact would be mainly through telephone communications.

Evaluation will entail marked essays and term tests by mail and final examinations in various geographical centres arranged for the convenience of the students.

Financial Mathematics

Ian B. MacNeill, Professor
Chairman, Department of Statistical and
  Actuarial Science
Faculty of Science
University of Western Ontario

This course will cover aspects of personal financial management such as compound interest, amortization, life insurance, pensions, stocks and bonds, and will relate these to broader financial issues. The course would be of particular interest to owners and managers of small businesses, as well as to all adults. Two credits in secondary school mathematics would be sufficient pre-requisite. This course could be taken in any of the three years of a general degree program.

Television programs will demonstrate the most important concepts and will be supported by a study guide. Additional readings from a number of texts will be required.

Students will have regular telephone access to the already-established Tutorial Facility of the University's Department of Statistical and Actuarial Sciences. Future technology could allow for videoconferencing to replace the telephone as means of student access to tutors. This course could be offered alternatively as a computer-assisted learning program on a microcomputer and would be enhanced if videotext technology were available thus allowing for immediate computer/ student interaction. For students who already have a home computer, the study guide could include documentation for selected subroutines which students could adapt to their own computer.

All students will be required to submit regular weekly assignments and to complete a final examination.

Understanding the Adolescent

MarySue McCarthy, Professor
Faculty of Education
York University

The life stage of Adolescence needs to be understood in our society because it is historically and sociologically a modern phenomenon and because psychologically it is the crucial bridge between childhood and adulthood.

This course will have as its target audience parents, teachers and all ordinary citizens in the community who may, through a more extensive undertaking of the adolescent stage of development, come to a greater self-understanding and a greater ability to relate to and work with young people. Theories of adolescent development in physical, emotional, psycho-social, cognitive and moral aspects will be studied in this course. Students will be expected to explore some of the sociological and moral conditions in our society which place special expectations and demands on the adolescent.

Emphasis will be placed in this course on communication skills to interact effectively with young people. Increased sensitivity to the adolescents' needs combined with the ability to challenge growth and responsibility in the developing young person will be the goal of the learnings in this course. It is to be a combination of theory and practical skill, of insight and action approaches to the young person in our society.

Texts selected for this course will be accompanied by handouts with other resource material. The use of film/videotape is envisaged.

Evaluation would be carried out through some of the following: a major paper, a visit to a community agency or school which works with adolescents, a taped and transcribed interview with an adolescent to show listening and related abilities, an exam which could be marked by computer.

Public Administration: The Central Decison Making Structure

A. K. McDougall, Associate Professor
Department of Political Science
Faculty of Social Science
University of Western Ontario

The course is designed to introduce the general undergraduate student to the legal and administrative framework of Canadian government. Emphasis is placed on the federal government, but reference will be made to the provincial and municipal levels. By the end of the course students will understand the legal basis of public administration, be acquainted with the major agencies in government, understand how the executive relates to the public service and have some understanding of the dominant approaches to public administration and policy-making today.

The course materials will include study notes, audiocassettes, readings and possibly videotapes.

Faculty/student interaction would be carried out by audiocassettes, telephone consultations and two face-to-face seminars.

Evaluation would include personal interviews with students, a test based on readings and notes, a report on personal experience and interest, and a final written examination.

Public Administration: Administration as Action

A. K. McDougall, Associate Professor
Department of Political Science
Faculty of Social Science
University of Western Ontario

This course will be built on the earlier course on the central decision-making structure and is designed to introduce students with some knowledge of government to the study of structure and its potential in a pluralistic society. The course introduces the major concepts of public administration, types of agencies and their function in politics and administration. The course does NOT overlap with courses on administrative behaviour or on business administration but attempts to emphasize the substance of public administration as a part of government.

The resource materials, faculty/student contacts, and methods of evaluation are similar to the ones for the course on Central Decision Making Structure.

Working and Understanding It (Sociology of Work)

Lorna R. Marsden, Professor of Sociology
Associate Dean, Division II
School of Graduate Studies
University of Toronto

The objectives of the course are: a) to get the student to see all jobs as part of a culture of work and as part of a complex web of social relationships which are changing but largely predictable; b) to bring students to an understanding of the role and meaning of work and a job in their own lives; c) to debate the options for change in the content of jobs and in the work place which may change the future for Canadian workers; d) to familiarize students with some of the major studies of work in the sociological literature.

The resource materials include television/videotape programs, basic readings, a bibliography, and statistical materials.

An important role in the course is to be played by tutors who will be in contact with the student either in person or through telephone. Each unit of learning should be followed up by an assignment which will provide an opportunity for the development of indispensible skills and the assessment of the students' achievements.

Exceptional Children

G. A. V. Morgan, Professor
Department of Family Studies
College of Family and Consumer Studies
University of Guelph

The major objectives of the course are to relate exceptionality to principles of normal child development within the family; to examine causes of exceptionality; to relate exceptionality to its social context; to review the effects of medical, public, health, and technological change on perception and treatment of exceptionality. The course will provide the student with an understanding of legislation, and develop skills in information retrieval and in the review of local community resources.

The potential target audience for this course is very broad and includes parents of exceptional children, parents in general, professionals in the early career stages, teachers of the exceptional who have no other access to appropriate courses, and those training to become volunteers in this field.

The course level could be adjusted in content and rigor to the level required by particular audience groups.

The major resource materials would consist of a "workbook" containing summaries of information and concepts, as well as reference materials; audiocassettes and television/videotape materials.

Faculty-student interaction would include telephoning, organization of study groups around regional/rural centres, and an extended face-to-face seminar.

Evaluation would consist of a series of frequent tests, a mid-term progress review and a final exam. Heavy emphasis is being put on self-evaluation by the student during the course.

Behaviour and the Brain

Peter H. Platenius, Professor
Chairman of Undergraduate Studies
Department of Psychology
Queen's University

The course will provide students with the basic grounding in those aspects of the nervous system which contribute to an understanding of human behaviour and thought. It will also deal with recent findings in areas which are likely to produce important practical applications or significant changes in our understanding of ourselves. The principal overall objective is to show how an understanding of "higher" mental processes can be achieved through research on the physiological basis of behaviour and thought. It will provide students with sufficient understanding of the basic principles of the nervous system to permit them to understand and place in context research reports appearing in the popular and specialized media. It will also provide an updating of knowledge for students whose work requires some familiarity with the subject matter (e.g., nurses, therapists, mental health workers, etc.).

The course material will comprise a textbook, supplementary readings, a study guide and a series of television/videotape programs. The main function of the video material would be to gain an understanding of the basic process of the nervous system as well as to present specialized topics in some depth.

Faculty-student interaction will be provided primarily through telephone consultations with individual students. An important function in this respect will be played by feedback to the students after the first of the two examinations.

Evaluation will be carried out through a series of self-tests for each module and an integrating test for credit combining a number of modules. Two proctored examinations will consist of a combination of multiple-choice items and short essays.

Children's Literature

Mary H. Pritchard, Professor
Program Coordinator
Faculty of Part-Time and Continuing Education
University of Western Ontario

The close reading of a number of familiar, classical works from the golden age of children's literature will introduce students to an intermediate university-level study of English literature. Students will have an opportunity to better understand literary qualities, to improve their analytic skills and their ability to formulate their thoughts coherently in written form.

This course would be of special use to parents, teachers, librarians and people who work with children, while at the same time providing for all adults an opportunity to reassess childhood experience.

The required books will be supplemented by a text on writing and by a study guide which will contain instructions, study questions and assignments. Audiocassettes containing instructors' comments will also be used to enhance learning.

Interaction between instructor and student will take place through correspondence with the instructor writing comments on students' mailed-in assignments. The instructor will also be available by telephone. Face-to-face interaction with the instructor will take place during one or more workshops on campus or at remote sites. The possibility of replacing workshops with teleconferencing may exist.

Student learning will be evaluated by means of their responses to the study questions, by means of two required essays and a final examination.

Marital and Family Relationships in Canada

Benjamin Schlesinger, Professor
Faculty of Social Work
University of Toronto

The course would deal with the family life cycle and with a review of such growing trends and changes in family formation as: voluntary childless couples, the dual working-parent family, delayed family, adopted family, the one-parent family, the reconstituted family; middle age and family life; grandparenthood and family life; the lasting marriage.

The course will be heavily based on existing media material produced by TVOntario, the National Film Board, and the Media Centre of the University of Toronto. Reading materials, a collection of statistics, and a study guide will be made available to students.

The evaluation will be based on student assignments and papers.

Housing for Canadians

Joan Simon, Associate Professor
Department of Consumer Studies
College of Consumer Studies
University of Guelph

The target groups for this course would include secondary school teachers (geography, social studies, family studies), municipal politicians, civil servants and real estate brokers. Considerable interest can be expected from citizens and consumers seeking information and enlightment. The course will aim to introduce the evolution of the Canadian house as a manifestation of Canadian culture. It will provide an understanding of how the concepts of life cycle and life style relate to housing and how house design influences behaviour. It will also explain the concept of tenure and economic aspects of acquiring shelter; the role of government in regulating and providing housing; and basic ecological issues involved in residential development.

Faculty-student interaction would entail a one-day workshop at the beginning of the course, telephone seminars and individual telephone consultations, and the minimal amount of correspondence comments (or on audiocassette) about assignments.

The evaluation of students would be centred around analyses of case studies of either real world models or hypothetical models divided into a series of assignments, with a final examination consisting of an evaluative essay. The possibility of a more standard combination of quizzes, examinations and essays is also considered.

Decision Analysis

I. P. Suttie, Associate Professor
Faculty of Social Science, Secretarial and Administrative Studies
Middlesex College
University of Western Ontario

This half-course in Decision Analysis will draw on findings from the behavioural disciplines and the quantitative disciplines to provide a general understanding of the terminology, concepts and techniques involved in decision analysis. It will have a practical orientation geared to helping students learn principles and skills for decision-making which they can then apply to their particular needs be they in work, personal life, or leisure activities in individual or group settings. The course is designed to meet the needs of a wide variety of students from those with an interest in personal improvement to those in administrative and management positions.

Television programs will be used, supported by print material. Because of the nature of the course content, the print material will be designed to be self-contained and complete. This would also minimize the need for immediate and continuous interaction with the instructor.

Instructor feedback to the written assignments will take place by mail in rapid turnaround. Videotext technology when sufficiently available would be used. Telephone links for students to the instructor will be scheduled regularly. A meeting between student and instructor will take place on a university campus at the beginning of the course. Alternately, a visit to the student by an appropriate member of a university could be considered.

Evaluation would consist of ten assignments, two term tests, a paper on an aspect of decision analysis and a formal, final examination.

Quality of Working Life

Eric Trist, Professor, Research Program
Quality of Working Life
Faculty of Environment Studies
York University

The course will provide an understanding of societal change as it affects the work place; it will examine new trends in work place organization; it will explain the philosophy and concepts of the quality of working life (QWL) as a societal response to changing social and organizational conditions.

The course components would include organizational ecology, QWL concepts, socio-technical analysis and process skills. It is expected that a broad range of working people from unionists to management would be attracted.

Learning resources will include videotapes and readings.

Faculty/student interaction will be provided through weekend-type meetings, telephone consultations and conference calls, and written responses by students to the video presentations. The analysis and redesign of the students' own organization would provide a vehicle for individual communication. This report will serve as a main evaluating instrument.